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16 Judge Hon. Salvador Mendoza Jr.

17 **UNITED STATES DISTRICT COURT**
18 **EASTERN DISTRICT OF WASHINGTON**

19 CITY OF SPOKANE, a municipal
corporation, located in the County of
Spokane, State of Washington,

20 Plaintiff,

21 v.

22 MONSANTO COMPANY, SOLUTIA
23 INC., and PHARMACIA
CORPORATION, and DOES 1 - 100,

24 Defendants.

CASE NO. 15-cv-00201-SMJ

**DEFENDANTS' LCivR 56(c)(1)(A)
OMNIBUS STATEMENT OF
MATERIAL FACTS IN SUPPORT
OF MOTION FOR SUMMARY
JUDGMENT**

Hearing: March 11, 2020 at 8:30
Richland
With Oral Argument

1 Pursuant to LCivR 56, Defendants Monsanto Company, Solutia Inc., and
2 Pharmacia LLC (collectively the “Monsanto”) hereby submit the following
3 Statement of Material Facts:

4 **I. INTRODUCTION**

5 1. Plaintiff’s (“City”) claimed damages in this case relate almost entirely
6 to the past and future costs of long overdue sewer systems upgrades designed to
7 meet stringent limits on the discharge of raw sewage to the Spokane River and
8 discharge permit requirements imposing numerical daily limits for numerous
9 substances but not PCBs. *See* Declaration of Melissa Nott Davis Re: Defendants’
10 Statement of Material Facts Not in Dispute (“Nott Davis Decl.”), Ex. 44. Indeed,
11 the City’s witnesses admit that:

- 12 a. There has never been a numerical discharge limit imposed for
13 PCBs Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 233:3-5; Ex. 2
14 (“Davis Dep.”), 42:21-43:16;
- 15 b. The need to comply with numerical discharge limits in its
16 permits for other constituents “drive” the City’s sewer upgrade
17 program Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 21:8-14,
18 86:14 – 88:16, 96:11-23, 132:9 – 133:19, 214:4 – 215:3, 228:6-
19 20; and
- 20 c. Not a single element of the City’s sewer upgrades was designed
21 specifically to address PCBs Davis Decl., Ex. 1 (“Hendron
22 Dep.”), 214:4-20; Ex. 2 (“Davis Dep.”), 63:18-65:18, 74:9 –
23 75:2, 100:10 – 101:14; Ex. 37, p. PCB-SPOKANE-01199788.
- 24

1 **A. Plaintiff’s Damages Relate to Raw Sewage, Phosphorus, Metals**
2 **And Other Constituents, Not PCBs**

3 2. At its core, this case is not about PCBs. This case is about the City’s
4 failure to address significant water quality issues stemming from hundreds of
5 thousands of pounds of raw sewage, metals, and phosphorus which it discharges
6 into the Spokane River each year. *See* Nott Davis Decl., Ex. 45, p. PCB-
SPOKANE-03311935; Ex. 46, p. 5-6; Ex. 27 (“Herman Rpt.”), p. 34.

7 3. The City’s most significant issue with the Spokane River is and has
8 always been the City’s own illegal and ongoing discharges of untreated sewage
9 into the waters. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 57:2-12; Ex. 7
10 (“Bowdan Dep.”), 36:23 – 37:3; Ex. 47, 3-4.

11 4. The City has been ordered by the State of Washington to cease
12 dumping raw sewage into the Spokane River since as early as 1909, but has never
13 ceased doing so. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 30:19 – 31:6; Ex. 48,
14 p. SPOKANE-PRR-2379449; Ex. 49, p. 459. Strict limits on the City’s dumping
15 of raw sewage into the Spokane River were first imposed in the City’s discharge
16 permits in 2000. Nott Davis Decl., Ex. 38. The City’s dumping of raw sewage
17 continues to this day; in 2019 the City dumped 30,297,935 gallons of combined
18 raw sewage and stormwater into the Spokane River, and violated discharge permit
19 limits on the frequency of dumping of raw sewage into the river on 38 occasions.
20 *See* Nott Davis Decl., Ex. 50; *id.*, Ex. 38.

5. Large amounts of substances of regulatory concern enter the Spokane River each year: 341,940,000 lbs of raw sewage and untreated waste water, 700,000 lbs of zinc, 36,000 lbs of lead, 105,800 lbs of phosphorous, and 2,900 lbs of cadmium. Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 34. PCBs, which comprise roughly 1.5 pounds (and declining) of the annual loading to the River, are a drop in the bucket. *See* Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 34, 38.

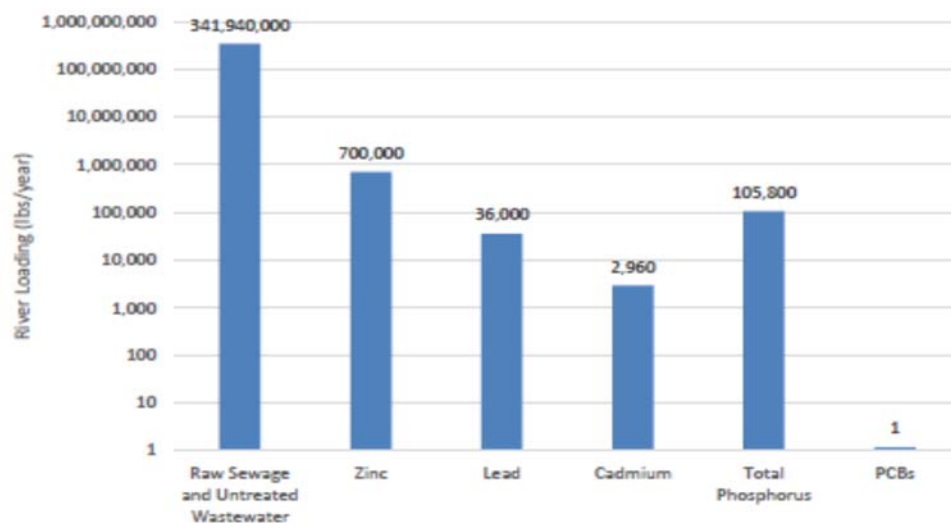
<u>Dilks Table 1 - In ounces per year</u> Uncertainty Range in Parentheses Where Available			
<u>Delivery Mechanism</u>	<u>Current Loading Rate (oz/year)</u>	<u>2011-2012 Loading Rate (oz/year)</u>	<u>Baseline Loading Rate (oz/year)</u>
Upstream Boundary	19.00362654 (14.21084751 to 23.77063794)		
City of Spokane MS4	0.47670114	0.605539286	1.662012084
City of Spokane CSO	0.076014506	0.11466595	0.463817326
Wastewater Treatment Plants			
Inland Empire Paper	1.095124241 (1.069356612 to 1.108008056)	0.81168032	0.579771657
Spokane County	0.088898321 (0.077302888 to 0.100493754)	0.00489585	0
City of Spokane	0.992053724 (0.914750837 to 1.082240427)	1.327032904	2.499460033
Contaminated Groundwater	0.850331764	0.850331764	0.850331764
Spokane Hatchery	0.097916991	0.097916991	0.097916991
Tributaries			
Latah (Hangman) Creek	1.172427129 (1.069356612 to 1.301265275)		
Little Spokane River	1.004937539 (0.103070517 to 1.906804561)		
Bedded sediments	0.012883815 (0.000644191 to 0.257676292)	0.012883815 (0.000644191 to 0.257676292)	0.012883815 (0.000644191 to 0.257676292)
TOTAL Current Loading: 24.87091571 oz/year			

6. The above table identifies the sources of loads of PCBs to the River. Of the 1.5 pounds of annual loading of PCBs in the Spokane River from all sources, the City contributes only 1.54 ounces per year, a negligible 6% of that annual load. Nott Davis Decl., Ex. 25 (“Dilks Rpt.”), p. 3; Ex. 11 (“Dilks Dep.”), 11:23 – 13:12. The MS4, to which most of the City’s claimed damages relate, contributes only 0.47 ounces of PCBs per year. Nott Davis Decl., Ex. 25 (“Dilks Rpt.”), p. 3; Ex. 11 (“Dilks Dep.”), 11:23 – 13:12.

7. The remaining 94% of the PCB load to the Spokane River is

1 contributed by other sources, over which the City has no control, including loads
2 contributed by the State of Idaho of 1.18 pounds, Inland Empire Paper of 1.1
3 ounces and the Spokane County Wastewater Treatment Plant of .09 ounces before
4 they ever even reach the City’s eastern boundary. Nott Davis Decl., Ex. 25 (“Dilks
5 Rpt.”), p. 3; Ex. 11 (“Dilks Dep.”), 11:23 – 13:12.

6 8. The below chart demonstrates the loading of other constituents in the
7 Spokane River: Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 34.



15 **Chart 4.3 Annual River Loading of Sewage, Metals, Phosphorus, and Total PCBs to the Spokane**
16 **River.** The loadings of sewage, three commonly reported metals, phosphorus, and PCBs are plotted
17 on log-scale to facilitate comparison between the several orders of magnitude difference between
18 the amounts of metals and sewage and the relatively small amounts of PCBs in the river each year.
19 The mass load of raw sewage and untreated wastewater was calculated using a density of 8.34
20 lbs/gallon and the discharge volume reported in SWWM (2019).

19 **B. The City is Required to Meet Numerical Discharge Limits for**
20 **Several Problem Substances, but not for PCBs**

21 9. As a consequence of these discharges of numerous substances, the
22 Spokane River is subject to multiple numerical discharge limitations, known as a
23 Total Maximum Daily Load (“TMDL”), for substances including phosphorus,
24 ammonia, lead, and dissolved oxygen (“DO”): Nott Davis Decl., Ex. 27 (“Herman

Rpt.”), p. 5; Ex. 3 (“Coster Dep.”), 51:20 – 52:11; Ex. 1 (“Hendron Dep.”), 204:7 – 205:5, 205:13-22, 234:5 – 235:13; Ex. 7 (“Bowdan Dep.”), 105:12-19, 146:7-13.

Spokane River Total Maximum Daily Loads (TMDLs)	
TMDL	Date of TMDL
Phosphorus TMDL	
Phosphorus	1992
Spokane River Dissolved Metals TMDL	
Cadmium	1999
Lead	1999
Zinc	1999
Spokane River and Lake Spokane Dissolved Oxygen TMDL*	
Biochemical Oxygen Demand (5 day) BOD ₅	2010
Total Phosphorous	2010
Ammonia	2010
*Incorporated into Eastern Washington Municipal Stormwater Permit	

10. The City is still in violation of its TMDL for Lead and Zinc, as these levels still exceed the Water Quality Standard. Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 35.

11. There has never been and is currently no TMDL for PCBs in the Spokane River. See Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 101:15 – 102:3; Ex. 2 (“Davis Dep.”), 61:13-62:24, 107:15-108:16; Ex. 7 (“Bowdan Dep.”), 105:8-11; Ex. 3 (“Coster Dep.”), 21: 17-21.

1 **C. There Is No Imminent Numerical Limit for PCBs Since The River**
2 **Meets USEPA Compliance Goals, The Spokane River Meets The**
3 **PCB Water Quality Standard, And PCB Levels In The River Are**
4 **Declining And Safe**

5 12. In 2015, the United States Environmental Protection Agency
6 (“USEPA”) established a compliance schedule for PCB levels in the Spokane
7 River when it published its “Plan for Addressing PCBs in the Spokane River”. The
8 compliance schedule set the following goals for instream PCB concentrations:

- 9 • December 15, 2020: Instream concentration of PCBs meets 200 pg/L
10 based on the annual central tendency of the preceding year.
- 11 • December 15, 2024: Instream concentration of PCBs meets 170 pg/L
12 based on the annual central tendency of the preceding year.
- 13 • December 15, 2027: The applicable water quality standards for PCBs
14 are met.

15 Nott Davis Decl., Ex. 51, p. 11-12.

16 13. According to the Washington Department of Ecology (“WDOE”), no
17 TMDL for PCBs will be issued so long as the Spokane River Regional Toxics
18 Task Force (“SRRTTF”) demonstrates measurable progress through compliance
19 with USEPA’s Plan for Addressing PCBs in the Spokane River. Nott Davis Decl.,
20 Ex. 52, p. 1-2.

21 14. The City admits that it has so far met all benchmarks in the USEPA’s
22 Plan for Addressing PCBs in the Spokane River. The average PCB concentration
23 in Spokane River at Nine Mile Dam, just downstream of the City, was 140 ppq in
24 2014, 144 ppq in 2016, and 89.8 in 2018. Nott Davis Decl., Ex. 11 (“Dilks Dep.”),
25 22:22 – 23:7; Ex. 1 (“Hendron Dep.”), 300:22- 301:13, 304:3-6; Ex. 53, p. 15; Ex.

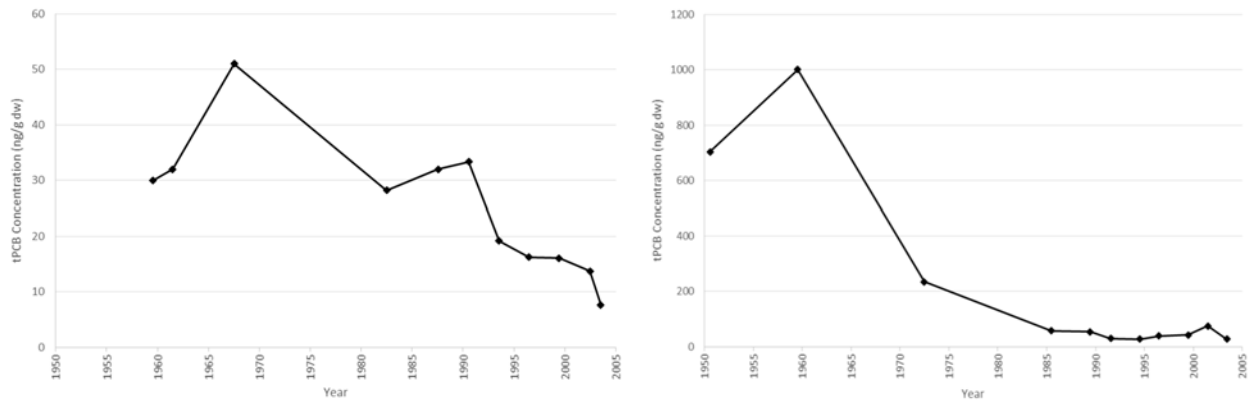
54, p. 11; Ex. 55, p. 10. Each of those averages are below USEPA’s instream PCB goal of 200 ppq for 2020, below the USEPAs instream PCB goal of 170ppq for 2024, and below the USEPA’s current standard of 170 ppq, which USEPA set as a compliance goal for 2026. *See* Nott Davis Decl., Ex. 52, p. 3; Ex. 51, p. 11; Ex. 3 (“Coster Dep.”) 24:2-8; Ex. 7 (“Bowdan Dep.”), 99:24 – 104:8; Ex. 54, p. 11.

15. The applicable water quality standard for PCBs in the Spokane River is 170 ppq. Nott Davis Decl., Ex. 22 (“Trapp Dep.”), 102:25 – 103:7; Ex. 1 (“Hendron Dep.”), 304:3-10; Ex. 3 (“Coster Dep.”), 24:2-8, 25:23 – 26:25; 27:1-14; Ex. 7 (“Bowdan Dep.”), 99:24 – 104:8.

16. The Spokane River currently meets the applicable 170 ppq water quality standard for PCBs in the Spokane River. *See* Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 300:22- 301:13; Ex. 3 (“Coster Dep.”) 24:2-8; Ex. 7 (“Bowdan Dep.”), 99:24 – 104:8; Ex. 22 (“Trapp Dep.”), 102:25 – 103:7.

17. PCBs in the Spokane River have been declining for the last 30 years for a number of reasons including: biodegradation of PCBs, and the rocky bed and rapid velocity of the Spokane River resulting in the River flushing itself constantly. Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 36-38; Ex. 56, p. 24-25. PCB levels in Spokane River are going down rapidly, reducing by half every ten years. Nott

Davis Decl., Ex. 56, p. 107.



“Chart 4.6 Temporal Trend in Age-dated PCB Concentrations in Sediment Cores, Upper Lake Spokane (Upper Panel) and Lower Lake Spokane (Lower Panel). dw = Dry Weight; tPCB = Total Polychlorinated Biphenyls. Adapted from WA Ecology (2011a).” Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 38.

18. PCB fish tissue concentrations in Spokane River are 7 times lower than FDA food tolerances for fish. Nott Davis Decl., Ex. 180 (“Woodyard Rpt.”), p. 16; Ex. 57, p. 10, Table 1.

19. Indeed, the City’s health experts, James Olson, David O. Carpenter, and Richard DeGrandchamp cannot identify any studies that purport to show that consumption of fish from the Spokane River at current PCB levels cause human disease. Nott Davis Decl., Ex. 15 (“Olson Dep.”), 14:14-24; Ex. 8 (“Carpenter Dep.”), 122:19 – 123:3; Ex. 10 (“DeGrandchamp Dep.”), 69:13-17, 91:10 – 93:4, 123:19 – 125:11.

II. BACKGROUND AND REGULATORY FRAMEWORK

A. The City’s Combined Sewer System and Riverside Park Water Reclamation Facility

20. The City’s Combined Sewer System (“CSS”) was built by the City

1 starting in the late 1800s and expanded over the years as the City grew. Today, the
2 CSS collects combined flows of raw sewage from buildings and stormwater from
3 roads and directs them to the City's Riverside Park Water Reclamation Facility
4 ("RPWRF"), which treats and discharges the flows to the Spokane River. Nott
5 Davis Decl., Ex. 1 ("Hendron Dep."), 25:14 – 26:13; 35:4 – 36:4; 50:6 – 51:17;
6 102:13 – 103:17, 280:24 – 281:11, 282:24 – 283:5.

7 21. When the CSS becomes overwhelmed by precipitation or snowmelt,
8 combined untreated sewage and stormwater overflows into the Spokane River.
9 These events are called combined sewer overflows ("CSO"). Nott Davis Decl.,
10 Ex. 1 ("Hendron Dep."), 169:10-22. CSO enters the Spokane River at discharge
11 points called outfalls ("CSO Outfalls"). *Id.*, 23:25 – 24:6, 80:21 – 82:9.

12 22. After Congress passed the Clean Water Act in 1972, wastewater
13 treatment facilities, including the RPWRF, were required to apply for and comply
14 with discharge limitations set forth in a National Pollutant Discharge Elimination
15 System permit ("Wastewater NPDES Permit"). Nott Davis Decl., Ex. 1 ("Hendron
16 Dep."), 97:7-25, 100:3-20; 33 U.S.C. §1251 *et seq.* (1972).

17 23. The City's first Wastewater NPDES Permit was issued in 1974. *See*
18 *generally* Nott Davis Decl., Ex. 34. Since then, the City's wastewater treatment
19 facility has operated pursuant to a Wastewater NPDES Permit that is subject to
20 periodic reapplication and renewal. Nott Davis Decl., Exs. 34, 35, 36, 37, 38, 39.

21 24. The City's Wastewater NPDES Permit also regulates CSOs as
22 discharges, so areas of the City that contribute to the CSS, and that are therefore
23 subject to CSO events ("CSO Basins"), are regulated by the Wastewater NPDES
24 Permit. Nott Davis Decl., Ex. 58, SPOKANE-PRR-3615320.

1 25. The Wastewater NPDES Permit imposes a limit on the City of one
2 CSO per CSO Outfall per year based on a 20-year moving average. Nott Davis
3 Decl., Ex. 59, p. 1 Summary; *see* Nott Davis Decl., Ex. 39. The City is not
4 currently in compliance with this permit requirement. Nott Davis Decl., Ex. 1
5 (“Hendron Dep.”), 23:25 – 24:6.

6 26. A Wastewater NPDES Permit may also incorporate Total Maximum
7 Daily Load (“TMDL”) limitations. *See e.g.* Nott Davis Decl., Ex. 39, p. 8. A
8 TMDL is the maximum amount of a pollutant that a water body can receive on a
9 daily basis without violating water quality standards. 40 C.F.R. § 130(2)(f). There
10 has never been a TMDL for PCBs. Nott Davis Decl., Ex. 1 (“Hendron Dep.”),
11 101:15 – 102:3; Ex. 2 (“Davis Dep.”), 61:13-62:24, 107:15-108:16; Ex. 7
12 (“Bowdan Dep.”), 105:8-11; Ex. 3 (“Coster Dep.”), 21: 17-21.

13 **B. The City’s Municipal Separate Storm Sewer System**

14 27. The City’s municipal separate storm sewer system (“MS4”) was
15 constructed by the City in the 1980s to remove stormwater flows from the CSS to
16 reduce CSOs. Nott Davis Decl., Ex. 2 (“Davis Dep.”), 104:13-25; Ex. 60, p. 6.
17 The City’s effort to construct its MS4 system reduced but did not eliminate the
18 City’s CSO problem. *See* Nott Davis Decl., Ex. 2 (“Davis Dep.”), 42:10-20; Ex. 1
19 (“Hendron Dep.”), 284:25 – 285:4. The MS4 discharges untreated stormwater to
20 the Spokane River. Nott Davis Decl., Ex. 26 (“Gobas Rpt.”), p. 12-13; Ex. 48, p.
21 SPOKANE-PRR 2379513.

22 28. In 2007, the WDOE issued the Eastern Washington Phase II
23 Municipal Stormwater Permit (“MS4 NPDES Permit”), which imposed obligations
24 on the City to manage the discharge of substances to the Spokane River from its

MS4 through the implementation of stormwater best management practices (“BMPs”). Nott Davis Decl., Ex. 40, p. 35. The MS4 NPDES Permit regulates the City’s MS4. Id.

29. Subject to limitations set forth in the permit, the MS4 NPDES Permit “authorizes the discharge of stormwater to surface waters and to ground waters of the state from MS4s owned or operated by [the City].” Nott Davis Decl., Ex. 42, p. 6.

30. The City, as operator of its MS4, must implement BMPs to reduce the amounts of numerous substances in stormwater. Nott Davis Decl., Ex. 2 (“Davis Dep.”), 58:6 – 61:12. These substances may include total suspended solids (“TSS”), biochemical oxygen demand (“BOD”), degradable organic material, metals (such as zinc, copper, lead, cadmium, chromium, and arsenic), oils and greases, phosphorus, ammonia, and pathogenic organisms. Nott Davis Decl., Ex. 2 (“Davis Dep.”), 58:6 – 61:12.

31. BMPs for reducing substances in stormwater include, but aren’t limited to, street cleaning, dry weather flushing of catch basins, improved litter control, screening of stormwater outfall points, diversion of runoff for percolation and recharge to grassy swales or drywells, and use of porous asphalt in new construction areas. Nott Davis Decl., Ex. 61, p. 7.

III. THE CITY HAS DUMPED RAW SEWAGE INTO THE SPOKANE RIVER, AND IGNORED ORDERS TO STOP DOING SO, FOR OVER A CENTURY

32. The City has been aware of problems with discharging sewage to the Spokane River for over 130 years. Nott Davis Decl., Ex. 45, p. PCB-SPOKANE-03311935.

1 33. Beginning in 1885, the City recognized that dumping raw sewage
2 directly in the Spokane River would negatively affect water quality, but it
3 continued to construct sewers which collected sewage from buildings and
4 stormwater from streets that emptied into the Spokane River. Nott Davis Decl.,
5 Ex. 1 (“Hendron Dep.”), 26:7-22; Ex. 45, PCB-SPOKANE-03311935. This
6 system of sewers grew over the year and became the City’s CSS.

7 34. The discharge of untreated sewage contaminates the Spokane River
8 with fecal coliform and other bacteria, which can cause waterborne pathogenic
9 diseases, such as gastroenteritis, dysentery, diarrhea, and other stomach ailments.
10 Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 27:7-13; Ex. 62, p. PCB-SPOKANE-
11 00003251.

12 35. In addition to risk of disease, the discharge of untreated sewage
13 negatively affects water quality because it is a source of nutrients that contribute to
14 harmful algal blooms in Long Lake, including phosphorous, total ammonia, and
15 total suspended solids (“TSS”). Algal blooms increase biochemical oxygen
16 demand (“BOD”) in Long Lake which reduces available dissolved oxygen in the
17 water and can harm animals and fish. The discharge of untreated sewage to the
18 Spokane River also negatively effects river pH, and contaminates the river with
19 chlorine, cadmium, lead, and zinc. Nott Davis Decl., Ex. 1 (“Hendron Dep.”),
20 26:14 – 28:6, 34:6-12, 84:7-22; Ex. 63, p. 7-8, 14-15; Ex. 38, p. 6-7; Ex. 49, p.
21 459.

22 36. In 1909 and 1929, the Washington State Department of Health
23 ordered the City to cease and prevent discharge of untreated sewage into the
24 Spokane River, but the City took no action. Nott Davis Decl., Ex. 1 (“Hendron

1 Dep.”), 30:19 – 31:6; Ex. 48, p. SPOKANE-PRR-2379449; Ex. 49, p. 459.

2 37. In 1933, the City received a violation notice from the Washington
3 State Department of Health because the discharge of raw sewage into the Spokane
4 River caused an unsanitary condition. The City was ordered to abate the nuisance
5 from the discharge of raw sewage within a year. The City did not do so. Nott
6 Davis Decl., Ex. 1 (“Hendron Dep.”), 48:19 – 49:13; Ex. 46, p. 5-6.

7 38. Also in 1933, the City’s Engineer recommended that the City build a
8 sewer treatment plant. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 34:19 – 35:16;
9 Ex. 47, 3-4. Initiatives to build a sewage treatment facility were defeated in 1933,
10 1936, and 1939. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 47:14 – 48:6; Ex. 45,
11 p. PCB-SPOKANE-03311936-37; Ex. 49, p. 459-60. Consequently, the City did
12 not build a wastewater treatment facility until 1958. Nott Davis Decl., Ex. 1
13 (“Hendron Dep.”), 34:19 – 35:16, 54:23-25.

14 39. In 1941, Washington State passed a law prohibiting cities, such as the
15 City, from discharging sewage into the Spokane River. Nott Davis Decl., Ex. 1
16 (“Hendron Dep.”), 51:6-10; Ex. 46, p. 4; RCW 90.48.010.

17 40. In 1958, the City finished construction of its first sewage treatment
18 plant. Nott Davis Decl., Ex. 64, p.113. Flows from the City’s old CSS were
19 directed to the treatment plant via a newly constructed intercept sewer. Id. CSS
20 sewer lines that connected to the intercept sewer retained CSO Outfalls to permit
21 discharge of CSO to the Spokane River during precipitation or snowmelt. Nott
22 Davis Decl., Ex. 48, p. 2-10, 3-10. In 1960 there were 45 CSO outfall points to the
23 Spokane River. Id., p. 2-10.

24 41. In 1958, the City’s wastewater treatment facility was only capable of

1 primary treatment. Nott Davis Decl., Ex. 54, p.113. Primary treatment is a
2 physical settling process where wastewater sits in a large vessel. Solids settle to
3 the bottom and scum rises to the surface, and both are removed. Primary treatment
4 only reduces pollutants in wastewater by about half. After primary treatment, the
5 City’s sewage treatment plant discharged the effluent and remaining pollutants into
6 the Spokane River after a limited disinfection process. Nott Davis Decl., Ex. 1
7 (“Hendron Dep.”), 39:18 – 40:19.

8 42. It was evident shortly after the City’s sewage treatment plant became
9 operational that it had been “grossly underdesigned”. Nott Davis Decl., Ex. 45, p.
10 PCB-SPOKANE-03311937. The plant lacked sufficient capacity to handle the
11 combined flows of untreated sewage and stormwater in the CSS, resulting in
12 frequent CSO events dumping hundreds of millions of gallons of untreated sewage
13 in to the Spokane River each year. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 80:8
14 – 81:19, 280:24 – 281:11, 282:24 – 283:5; *see generally* Nott Davis Decl., Ex. 65,

15 43. In addition to being underdesigned, the plant lacked available
16 treatment technologies on the day it started operation. Nott Davis Decl., Ex. 45, p.
17 PCB-SPOKANE-03311937. The nearby city of Coeur D’Alene, Idaho had
18 constructed a sewage treatment facility in 1939, almost 20 years earlier than the
19 City, which employed both primary and secondary treatment. Nott Davis Decl.,
20 Ex. 66, p. 68, 81-82; Ex. 1 (“Hendron Dep.”), 38:22-25, 39:1-5, 42:3-25, 43:1-21.

21 44. Secondary treatment is a biological process that occurs in a large
22 oxygenated vessel following primary treatment. A variety of microbes and
23 bacteria consume dissolved and suspended substances such as phosphorus and
24 nitrogen that remain in the wastewater. After treatment in the oxygenated vessel,

1 effluent is transferred to a settling tank where solids are removed. The treated
2 wastewater is then disinfected and discharged from the plant into the Spokane
3 River. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 41:1-19.

4 45. Despite the construction of the City’s sewage treatment plant, the City
5 continued to discharge annually hundreds of millions of gallons of untreated
6 combined sewage and stormwater into the Spokane River through hundreds of
7 CSO events. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 57:2-12, 280:24 – 281:11,
8 282:24 – 283:5; Ex. 7 (“Bowdan Dep.”), 36:23 – 37:3; Ex. 28 (“Kavanaugh Rpt.”),
9 p. 19, 24, 33.

10 46. In May 1972, the City estimated that during an average year “just
11 under 1,000 overflow events occurred from 44 overflow points totaling 447 million
12 gallons of combined sewage, along with approximately 280 million gallons
13 bypassed at the sewage treatment plant.” Nott Davis Decl., Ex. 66, p. 1-3.

14 47. In 1968 and 1970, the Washington State Water Pollution Control
15 Commission ordered the City to upgrade its treatment plant to provide secondary
16 treatment and improved disinfection. The City was also ordered to evaluate the
17 nature and magnitude of its CSO flows, determine the most feasible method to
18 control or eliminate CSOs, and develop a phased construction program for CSO
19 control and a cost analysis to complete these projects. Nott Davis Decl., Ex. 53, p.
20 2; Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 62:6-13; Ex. 175, p. 55.

21 48. The City failed to comply with those orders. On November 10, 1972,
22 the WDOE sent a letter to the City enclosing a Notice of Violation (“NOV”). The
23 transmittal letter characterized the City’s conduct as not making “a meaningful
24 effort to respond in kind” and having “given [the WDOE] little alternative in this

1 matter due to the lack of physical improvements since March 1968”. Nott Davis
2 Decl., Ex. 176, p. 2. The NOV stated that the City “is not in compliance with the
3 required program for meeting water quality standards as established by the above-
4 mentioned Chapter 37-12 WAC, and this agency’s Order Docket Number 69-77,
5 dated January 8, 1970.” The City did not meet these deadlines. Id., p. 4-5 (p. 2-3
6 of Notice of Violation).

7 49. The NOV ordered the City to provide: (1) secondary treatment not
8 later than October 1, 1975, and (2) an engineering plan by January 1, 1973 to
9 eliminate CSO overflows. The City did not meet these deadlines. Nott Davis
10 Decl., Ex. 176, p. 4-5 (p. 2-3 of Notice of Violation).

11 50. In 1972, the City first considered the construction of separate storm
12 sewer systems to address its CSO problem. It also considered the construction of
13 large storage tanks to hold excess flows from its CSS as a solution for its CSO
14 problem. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 86:14 – 88:16, 96:11-23,
15 132:9 – 133:19.

16 51. The designs for large storage tanks to hold excess flows from the CSS
17 were created before PCBs were ever detected in the Spokane River or the waste
18 water system. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 86:14 – 87:15.

19 52. In 1977, the City finished construction of a secondary treatment
20 facility at its sewage treatment plant – nine years after WDOE ordered it to do so
21 and almost 40 years after the nearby city of Coeur D’Alene, Idaho had
22 implemented secondary treatment. Nott Davis Decl., Ex. 1 (“Hendron Dep.”),
23 65:4-8; *see* Nott Davis Decl., Ex. 66, p. 68, 81-82. The addition of secondary
24 treatment improved the quality of effluent from the treatment plant, but did not

1 reduce the City's CSO problem. Nott Davis Decl., Ex. 1 ("Hendron Dep."), 115:8-
2 20.

3 53. In 1977, the City estimated that during an average year "over 929
4 overflow events occurred from 33 overflow points totaling 565 million gallons of
5 combined sewage, and an estimated 560 million gallons of bypasses at the sewage
6 treatment plant." Nott Davis Decl., Ex. 67, p. 1-3.

7 54. In 1977, the City issued a Sewer Overflow Abatement Plan to
8 evaluate alternatives for reducing Combined Sewer Overflows to the Spokane
9 River. Nott Davis Decl., Ex. 67, p. 1-3. Of the alternatives evaluated, the City
10 elected to create its MS4 by separating stormwater flows from sewage flows in
11 selected areas of the City. The purpose of the creation of the MS4 was to reduce
12 CSOs to the Spokane River. Nott Davis Decl., Ex. 62, p. 28. The City's
13 stormwater separation project was not completed until the early 1990s. Nott Davis
14 Decl., Ex. 1 ("Hendron Dep."), 136:11-17.

15 55. In 1988, the Washington Administrative Code 173-245-030 required
16 the City to "Incorporate CSO reduction plans into [its] respective general sewer
17 plans and into plans for new or upgraded sewage treatment facilities." Nott Davis
18 Decl., Ex. 68.

19 56. In 1991, the City estimated that it discharged "69 million gallons of
20 combined storm and sanitary wastewater to the Spokane River and its tributaries."
21 Nott Davis Decl., Ex. 69, p. SPOKANE-PPR-0906172. It recognized that that
22 Revised Code of Washington 90.48.035 "require[s] wastewater collection system
23 operators to achieve 'the greatest reasonable reduction of combined sewer
24 overflows at the earliest possible date.'" Id.

1 57. In 1992, the City's Wastewater NPDES Permit imposed on the City a
2 limit of one CSO per CSO Outfall per year. Nott Davis Decl., Ex. 59, p. 1
3 Summary.

4 58. In 1994, the City issued a CSO Reduction Plan, which also
5 recommended storage facilities, sewer separation and conveyance improvements to
6 control the City's CSOs. Nott Davis Decl., Ex. 48, p. SPOKANE-PRR-2379411;
7 Ex. 67, p. 1-3 – 1-4. The goal of the 1994 plan was to control all remaining CSO
8 outfalls by 2017. Id., p. SPOKANE-PRR-2379380. The plan was approved by the
9 WDOE in 1994, but the Spokane City Council did not adopt the plan until 1999,
10 five years later. Nott Davis Decl., Ex. 1 ("Hendron Dep."), 96:11-23, 196:11-17;

11 59. In 2000, the City received a Noncompliance Warning from WDOE
12 which accused the city of neglecting its legal obligations because of its failure to
13 curtail its CSO events. Nott Davis Decl., Ex. 1 ("Hendron Dep."), 199:24 – 200:3;
14 *see generally* Nott Davis Decl., Ex. 70. The warning required the City to submit a
15 plan to WDOE and post public notice signs in conspicuous locations regarding the
16 CSO program. Nott Davis Decl., Ex. 70, p. PCB-SPOKANE-03306938. Mr.
17 Hendron confirmed that "all of the signage that you see in the City of Spokane
18 related to this issue was required regardless of PCBs." Nott Davis Decl., Ex. 1
19 ("Hendron Dep."), 197:7-198:4.

20 60. The City's 2000 Wastewater NPDES Permit specified that "[n]o
21 authorization is given by this permit for discharge from a CSO that causes adverse
22 impacts that threaten characteristic uses of the receiving water as identified in the
23 Water Quality Standards." Nott Davis Decl., Ex. 38, p. 34. The 2000 Wastewater
24 NPDES Permit established a CSO Compliance Schedule, which incorporated a

1 deadline of December 31, 2017 for meeting final State and Federal requirements of
2 one CSO event per outfall per year and added that this discharge standard must be
3 based on a 20-year moving average of discharge events for each outfall. Nott
4 Davis Decl., Ex. 38, p. 36-37.

5 61. In 2005, the City amended the 1994 CSO Reduction Plan and issued
6 the 2005 CSO Reduction System Wide Alternative Report. The 2005 report stated
7 that the objective was to comply with Washington law, RCW 90.48.480, which
8 “requires the control and reduction of combined sewer overflows (CSO) for the
9 City of Spokane (City).” Nott Davis Decl., Ex. 71, p. SPOKANE-PRR-3615320,
10 3615394; Ex. 67, p. 1-3.

11 62. In 2006, the City received a 60-day notice letter from the Sierra
12 Club, alleging violations of the Clean Water Act because of the City’s continuing
13 dry-weather CSO discharges, significant data gaps in CSO monitoring, and its
14 failure to perform necessary maintenance and monitoring under its Wastewater
15 NPDES Permit, which resulted in such dry-weather discharges. *See* Nott Davis
16 Decl., Ex. 72, p. 4-9. The Sierra Club noted that “the violations are of serious
17 concern . . . because they involve the discharge of significant amounts of untreated
18 sewage, into the Spokane River, often during dry weather months, when the river
19 flow is extremely low and unknowing recreationalists are more likely to be using
20 the river.” *Id.*, at 4-5.

21 63. On June 30, 2017, WDOE issued an Administrative Order,
22 determining the City violated sections of the 2011 Wastewater NPDES Permit
23 related to CSO discharges. Nott Davis Decl., Ex. 73, p. PCB-SPOKANE-
24 00695478. WDOE ordered the City to have all CSO projects under contract for

1 construction and be able to provide a specific date when each CSO outfall will be
2 controlled on or before December 31, 2017. *Id.*, p. PCB-SPOKANE-00695480.
3 The City did not meet this deadline. Nott Davis Decl., Ex. 1 (“Hendron Dep.”),
4 277:17 – 278:20.

5 64. To this day, the City has not met its obligation to reduce all of its CSO
6 overflows to not more than one overflow per outfall per year on a 20-year average.
7 *See generally* Nott Davis Decl., Ex. 65; Ex. 1 (“Hendron Dep.”), 280:24 – 281:11,
8 282:24 – 283:5; Ex. 2 (“Davis Dep.”), 38:16 – 39:17; Ex. 7 (“Bowdan Dep.”),
9 35:15-24. In 2019 the City dumped 30,297,935 gallons of combined raw sewage
10 and stormwater into the Spokane River, and violated discharge permit limits on the
11 frequency of dumping of raw sewage into the river on 38 occasions. *See* Nott
12 Davis Decl., Ex. 1 (“Hendron Dep.”), 280:24 – 281:11, 282:24 – 283:5; Ex. 50;
13 Ex. 38.

14 65. The City admits that these projects were necessary to comply with
15 state law and the Wastewater NPDES Permit requirements, not to reduce PCBs.
16 Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 86:14 – 88:16, 96:11-23, 132:9 –
17 133:19, 228:6-20.

18 **IV. THE CITY’S WASTEWATER NPDES PERMITS AND MS4 NPDES**
19 **PERMITS HAVE NEVER IMPOSED A TMDL ON PCB**
20 **DISCHARGES**

21 66. The City’s Wastewater NPDES Permits issued by WDOE have never
22 included a TMDL for PCBs. Nott Davis Decl., Ex. 1, “Hendron Dep.”, 101:21-23;
23 *see* Nott Davis Decl., Exs. 34, 35, 36, 37, 38, 39.

24 67. The City’s first Wastewater NPDES Permit, issued in 1974, set limits
for discharges of BOD, TSS, fecal coliform bacteria, chlorine, pH and phosphorus.

1 It did not mention PCBs. Nott Davis Decl., Ex. 34, p. PCB-SPOKANE-07482526;
2 Ex. 1 (“Hendron Dep.”), 102:13 – 105:20.

3 68. The City’s second and third Wastewater NPDES Permits, issued in
4 1980 and 1986, similarly set limits for discharges of BOD, TSS, fecal coliform
5 bacteria, chlorine, pH and phosphorus. Neither permit mentioned PCBs. Nott
6 Davis Decl., Ex. 35, p. 2; Ex. 36, p. 2; Ex. 1 (“Hendron Dep.”), 149:18 – 150:10.

7 69. The City’s 1992 NPDES Permit imposed discharge limits on
8 ammonia, mercury, and silver as well as a limit of one CSO event per outfall per
9 year. Nott Davis Decl., Ex. 59, p. 1, Summary; Ex. 1 (“Hendron Dep.”), 163:725,
10 191:9-20. There was no mention of PCBs in the permit. *See generally id.*

11 70. The City’s 2000 Wastewater NPDES Permit expanded effluent
12 limitations, imposing limits for BOD, TSS, fecal coliform bacteria, pH, total
13 ammonia, total residual chlorine, phosphorus, cadmium, lead, and zinc. Nott Davis
14 Decl., Ex. 38, p. 22. The permit continued to limit CSOs to one overflow per
15 outfall per year, subject to a 20-year moving average, and imposed a deadline of
16 December 31, 2017 for full control of CSO events to be completed. *Id.*, p. 2; Nott
17 Davis Decl., Ex. 1 (“Hendron Dep.”), 23:13-18, 193:12 – 194:7. There was no
18 mention of PCBs in the permit. *See generally id.*

19 71. The 2007 MS4 NPDES Permit, which was the first to regulate its
20 MS4, does not impose a TMDL for PCBs. Nott Davis Decl., Ex. 40, p.
21 SPOKANE-PRR-0000853; Ex. 1 (“Hendron Dep.”), 221:3 – 222:4, 224:23-25.

22 72. The City’s 2011 Wastewater NPDES Permit required, for the first
23 time, that the City comply with a TMDL for dissolved oxygen in the Spokane
24 River (“DO TMDL”). There was no TMDL for PCBs in the permit. Nott Davis

Decl., Ex. 39, p. 8-10.

73. The 2014 MS4 NPDES Permit, which regulates the City’s MS4, does not impose a TMDL for PCBs. *See* Nott Davis Decl., Ex. 42, Appendix 2.

74. In 2016, the City argued, in response to a draft Wastewater NPDES Permit, against the imposition of PCB discharge limits. Nott Davis Decl., Ex. 37, p. PCB-SPOKANE-01199786. That draft permit was never adopted. Nott Davis Decl., Ex. 3 (“Coster Dep.”), 28:21 – 29:6.

75. The 2019 MS4 NPDES Permit, which regulates the City’s MS4, does not impose a TMDL for PCBs. *See* Nott Davis Decl., Ex. 43, p. 13, Appendix 2.

V. THE CITY IS BUILDING NEXT LEVEL TREATMENT (NLT) AT ITS WASTEWATER FACILITY TO ADDRESS PHOSPHORUS, NOT PCBs

76. In 1992, the USEPA issued the Dissolved Oxygen (“DO”) TMDL to address phosphorus in the Spokane River. *See* Nott Davis Decl., Ex. 74. Despite some phosphorus reduction achieved through storm sewer separation and creation of its MS4, phosphorus in City effluent was contributing to eutrophication and algal blooms in Long Lake. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 127:2 – 128:18; Ex. 62, p. PCB-SPOKANE-00003256.

77. Beginning in 2011, the City’s Wastewater NPDES Permit required compliance with the Spokane River DO TMDL. Nott Davis Decl., Ex. 39, p. 8-10.

78. In order to comply, the City was required to install a “full phosphorus removal process train [at its sewage treatment plant] including chemical addition and have operational the technology needed to comply with [final] effluent limitations during the season March 1 to October 31.” Nott Davis Decl., Ex. 39, p. 8. The City was required to have the NLT operational by March 1, 2018. *Id.*

1 79. Next Level Treatment (NLT), also referred to as tertiary treatment, is
2 a process designed to remove residual phosphorous from wastewater that has
3 undergone both primary and secondary treatment, in order to prevent the negative
4 water quality effects of phosphorus, among other things, on dissolved oxygen in
5 the Spokane River. Excess dissolved oxygen can lead to eutrophication and algae
6 blooms that can negatively affect water quality and the aquatic ecology. Nott Davis
7 Decl., Ex. 1 (“Hendron Dep.”), 33:24 – 34:12, 105:21 – 106:5, 128:3-18, 252:3-9.

8 80. The City first considered tertiary treatment to remove phosphorus
9 from its effluent in the early 1970s. The City’s consultants identified a space
10 within the facility for the construction of a tertiary chemical treatment to achieve
11 phosphorus removal. Nott Davis Decl., Ex. 63, p. 29-30. The area for tertiary
12 treatment identified in the City’s study in 1972 is the same location for the NLT
13 system that is currently under construction. Nott Davis Decl., Ex. 1 (“Hendron
14 Dep.”), 89:12 – 91:3; Ex. 63, Exhibit XII-1. The NLT designs predated the
15 discovery of PCBs in the storm sewer system and the Spokane River. Nott Davis
16 Decl., Ex. 1 (“Hendron Dep.”), 89:12-18.

17 81. The 2011 Wastewater NPDES Permit requires the NLT to be operated
18 from March through October, referred to as “the critical season”. Nott Davis
19 Decl., Ex. 1 (“Hendron Dep.”), 252:19 – 253:6. The Permit does not require year-
20 round operation of the NLT. *See* Nott Davis Decl., Ex. 39, p. 8.

21 82. The City did not meet its deadline to have NLT in operation by March
22 1, 2018. WDOE issued a Notice of Violation to the City which extended the date
23 for compliance with the requirements set out in the Wastewater NPDES Permit.
24 Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 273:2-18.

1 83. The NLT system is still currently under construction. Nott Davis
2 Decl., Ex. 1 (“Hendron Dep.”), 264:9-15. The current deadline for NLT operation
3 set by WDOE is March 1, 2021. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 271:7-
4 12; Ex. 75, p. PCB-SPOKANE-00780232.

5 **VI. THERE IS NO ELEMENT OF NLT CONSTRUCTION AND DESIGN**
6 **THAT WAS MADE NECESSARY BY PCBs**

7 84. There is no element of NLT construction and design that was made
8 necessary by PCBs or could have been disposed of had PCBs never existed. Nott
9 Davis Decl., Ex. 1 (“Hendron Dep.”), 214:4-20; Ex. 37, p. PCB-SPOKANE-
10 01199788.

11 85. In arguing against the imposition of PCB discharge limits in a draft
12 Wastewater NPDES Permit, the City stated: “There are no PCB design loadings
13 associated with the NLT treatment system design. NLT was constructed solely for
14 phosphorus removal and compliance with the DO TMDL requirements. While
15 additional PCB removal may be achieved through this system, it is not verified and
16 PCB removal was not a design consideration.” Nott Davis Decl., Ex. 37, p. PCB-
17 SPOKANE-01199788; Ex.1 (“Hendron Dep.”), 265:16-25.

18 86. The City admits that the primary driver for the Next Level Treatment
19 was to address phosphorus removal requirements. Nott Davis Decl., Ex. 1
20 (“Hendron Dep.”), 89:9-18, 220:9-16, 272:7-16, 272:2-16; Ex. 75, p. PCB-
21 SPOKANE-00780232; Ex. 37, p. PCB-SPOKANE-01199788.

22 87. The City did not sufficiently test for PCB removal by NLT to draw
23 any scientifically reliable conclusions on the amount of PCBs captured by the
24 NLT. Nott Davis Decl., Ex. 3 (“Coster Dep.”), 30:25, 31:1-7.

1 88. The City does not currently have scientifically reliable conclusions
2 about the effectiveness of removing PCBs using the NLT system until a pilot study
3 can be conducted several years down the line. Nott Davis Decl., Ex. 3 (“Coster
4 Dep.”), 30:25 - 31:7, 33:15-25.

5 89. The chemical additional of alum and CEPT is done to enhance the
6 removal of phosphorus during the membrane filtration stage. Nott Davis Decl.,
7 Ex. 1 (“Hendron Dep.”), 252:3-18. The chemical additional of alum and CEPT
8 does not increase the removal of PCBs from the wastewater stream. Nott Davis
9 Decl., Ex. 76, p. 4-5 – 4-6; Ex. 3 (“Coster Dep.”), 34-3-7, 34:13-25, 35:1-10.

10 **VII. CONTINUOUS OPERATION OF THE NLT SYSTEM IN THE NON-**
11 **CRITICAL SEASON IS RECOMMENDED FOR REASONS OTHER**
12 **THAN PCBS**

13 90. During the non-critical season months, the City’s stormwater and
14 wastewater still has a number of constituents subject to TMDLs, including
15 phosphorous, CBOD, fecal coliform, ammonia, TSS, and metals. Nott Davis
Decl., Ex. 3 (“Coster Dep.”), 51:20 – 52:11.

16 91. Harmful algae and daphnia blooms in the river can occur outside the
17 critical season. Nott Davis Decl., Ex. 3 (“Coster Dep.”), 40:1 – 41:9.

18 92. During the non-critical season, the City estimates that NLT would
19 remove 84,700 pounds of phosphorous, which would otherwise be discharged by
20 the RPWRF into the Spokane River, and ultimately settle at the bottom of Long
21 Lake. Nott Davis Decl., Ex. 3 (“Coster Dep.”), 55:12 – 56:2.

22 93. Joel Bowdan, the City’s wastewater treatment expert, testified that
23 shutting down a membrane system for as long as four months (the length of the
24 Non-Critical Season) results in a very real danger of biological growth on the

1 membranes, fouling and ruining them. Nott Davis Decl., Ex. 7 (“Bowdan Dep.”),
2 152:15-21.

3 94. Mr. Bowdan cannot name a single municipal wastewater plant that
4 shuts down a tertiary membrane filtration system for as long as four months. Nott
5 Davis Decl., Ex. 7 (“Bowdan Dep.”), 148:2-5.

6 95. According to Mr. Bowdan, “[m]embranes as a whole and on a general
7 -- just from a general level like to be run rather than not run or have periods of
8 shutdown.” Nott Davis Decl., Ex. 7 (“Bowdan Dep.”), 150:24-151:6.

9 Mr. Bowdan explained that “if you can keep [membranes] running, they tend
10 to run better and you minimize the cleaning aspect of those.” Nott Davis Decl.,
11 Ex. 7 (“Bowdan Dep.”), 152:7-14

12 96. In a 2011 email, Dale Arnold, the former wastewater director,
13 discussed the potential benefits of running the NLT system year-round for
14 phosphorous removal. Nott Davis Decl., Ex. 77, p. PCB-SPOKANE-03338968-69.

15 97. The City’s consultants also explained that NLT must be operated
16 year-round “to have optimal performance during the critical season and optimal
17 life of the membranes”. Nott Davis Decl., Ex. 78, p. PCB-SPOKANE-08141709.

18 98. The City piloted, and ultimately selected, a NLT membrane
19 manufactured by Pall Corporation. Nott Davis Decl., Ex. 3 (“Coster Dep.”), 17:23
20 – 18:11, 41:16-20.

21 99. The Pall Corporation’s Operations and Maintenance Manual and its
22 Design and Operating Parameters for the membrane assumed year round operation
23 of the membrane and recommended avoiding system shutdowns. Nott Davis
24 Decl., Ex. 79, p. PCB-SPOKANE-08122297; Ex. 3 (“Coster Dep.”), 42:7-14,

1 45:23 – 46:18. The Operations and Maintenance Manual indicates that shutdowns
2 longer than 72 hours create a concern for biological growth on filters or piping.
3 Nott Davis Decl., Ex. 3 (“Coster Dep.”), 44:10-17.

4 100. In arguing against the imposition of PCB discharge limits in a draft
5 Wastewater NPDES Permit, the City stated: “Although NLT appears capable of
6 further reducing PCBs, the minimal data collected during piloting may not
7 represent the Non-Critical Season, and in any case, is too limited to provide
8 statistical significance.” Nott Davis Decl., Ex. 37, p. PCB-SPOKANE-01199789.

9 101. The City intends to conduct a further PCB Pilot with a separate
10 membrane unit concurrent with optimization of the NLT system and subsequently
11 phase in year-round operation of PCB removal. Nott Davis Decl., Ex. 1 (“Hendron
12 Dep.”) 266:1-9; Ex. 37, p. PCB-SPOKANE-01199788. The City expressed
13 concern that operation of the NLT membrane for PCB removal in the non-critical
14 seasons could damage the membrane system. Nott Davis Decl., Ex. 37, p. PCB-
15 SPOKANE-01199788 - 89.

16 102. In April 2019, the City applied to the WDOE for a twenty-year
17 variance for PCB Discharge Limits. The City requested that its Highest Attainable
18 Concentration (HAC) for PCBs be updated once the NLT was online and
19 optimized to reflect the effects of actual NLT treatment. Nott Davis Decl., Ex. 3
20 (“Coster Dep.”), 73:24 – 81:22; Ex. 80, p. 1 (“Executive Summary”).

21 103. In its application, the City proposed a schedule by which it would
22 collect PCB data for the development of the final HAC from 2021 to 2025 in order
23 to develop a final HAC in the winter 2025. Prior to the completion of piloting in
24 2025, the PCB effluent discharge cannot be reasonably scientifically estimated.

1 Nott Davis Decl., Ex. 3 (“Coster Dep.”), 80:4 – 81:22; Ex. 80, p. 14 (“Highest
2 Attainable Condition”).

3 **VIII. FOR DECADES THE CITY HAS KNOWN OF AND USED THE**
4 **SAME BMPS FOR ITS MS4 THAT IT NOW CLAIMS ARE**
5 **NECESSITATED BY PCBS ALONE**

6 104. The City participated in a study in 1976 by the US Army Corps of
7 Engineers to evaluate stormwater management in the Spokane area to protect the
8 aquifer used for drinking water. That study identified BMPs that would be adopted
9 by the City over the years to address stormwater constituents like phosphorus and
10 TSS. Those very same BMPs are now being claimed by the City to be exclusively
11 required by PCBs. Nott Davis Decl., Ex. 81, p. 1, 254-263; Ex. 2 (“Davis Dep.”),
12 65:16-22.

13 105. Best management practices for stormwater management have existed
14 since the 1970s. *See* Nott Davis Decl., Ex. 81.

- 15 • Street sweeping was a BMP recognized in the 1970s, *id.*, Ex. 2,
16 (“Davis Dep.” 87:1-88:20);
- 17 • Porous pavement as a BMP was being evaluated in the 1970s, (*id.*,
18 88:21-91:2); and,
- 19 • Grass percolation and bioretention, or grassy, swales were recognized
20 or at least evaluated in the 1980s for removal of contaminants other
21 than PCBs (*id.*, 92:3-21, 98:14-17).

22 106. The purpose of grassy swales is to allow the stormwater to naturally
23 filter through the soil, capturing substances like phosphorus, metals, oils, etc. Nott
24 Davis Decl., Ex. 54, p. A-6.

107. The purpose of street sweeping is to remove debris and particulate

1 matter from street surfaces, preventing those materials from being washed into the
2 stormwater system during wet weather and discharged to the River. Nott Davis
3 Decl., Ex. 54, p. A-6.

4 108. BMPs are meant to reduce numerous constituents in stormwater, such
5 as: TSS, BOD, degradable organic material, zinc, copper, lead, cadmium,
6 chromium, and arsenic, oils/greases, phosphorus, ammonia, and pathogenic
7 organisms from animal waste. Nott Davis Decl., Ex. 2 (“Davis Dep.”), 58:6 –
8 61:12; Ex. 81, p. 249-250.

9 109. In the late 1970s, the City adopted a plan to separate some of its
10 stormwater flows from its CSS and create an MS4. Construction of the MS4
11 started in the 1980s and was completed in 1992. Nott Davis Decl., Ex. 1
12 (“Hendron Dep.”), 65:9-20, 86:5-9.

13 110. In 1979, the City submitted an Environmental Impact Statement
14 (“EIS”) to the USEPA for its MS4 construction project. Nott Davis Decl., Ex. 61,
15 p. iv-v.

16 111. As part of its application, the City voluntarily implemented the
17 following best management practices (“BMPs”): more frequent street cleaning, dry
18 weather flushing of catch basins, improved litter control, screening of storm outfall
19 points, diversion of runoff for percolation and recharge, use of porous asphalt in
20 new construction areas, investigation of alternative deicing methods. Nott Davis
21 Decl., Ex. 61, p. 7.

22 112. The City has voluntarily adopted these BMPs since 1979, before
23 PCBs were ever detected in the River. Nott Davis Decl., Ex. 1 (“Hendron Dep.”),
24 138:5-11, 138:21-24, 139:8 – 140:17.

1 113. From the 1980s through 1992, the City built its separate stormwater
2 system, which is referred to as the MS4 system. Nott Davis Decl., Ex. 1
3 (“Hendron Dep.”), 136:11-17.

4 114. On March 10, 1986, the City of Spokane passed §11.19.2912 of the
5 Spokane Municipal Code, titled “Swale Percolation”, which states the following:
6 “Grass swale percolation areas required for the handling of storm water drainage
7 may be incorporated into the required landscape plantings so long as neither the
8 drainage requirements nor the landscape requirements are compromised.” SMC §
9 11.19.2912.

10 115. During its construction, the City considered adding MS4 systems to
11 CSO basins to help reduce CSO events, but ultimately it did not do so. Nott Davis
12 Decl., Ex. 2 (“Davis Dep.”), 36:14-38:15.

13 116. In 2000, the City developed its first Stormwater Management Plan.
14 The BMPs listed include a street cleaning program, and emphasized use of grassed
15 biofiltration swales, to reduce stormwater runoff impacts. Nott Davis Decl., Ex. 82
16 p. SPOKANE-PRR-0897710, 0897712. The Stormwater Management Plan was
17 updated in 2004. The BMPs listed required street sweeping and the regrading or
18 reconstruction of swales. *See generally* Nott Davis Decl., Ex. 82, p. SPOKANE-
19 PRR-0897673, 0897681.

20 117. The City’s 2007 Engineering Services Design Manual identifies
21 methods of stormwater conveyance and disposal that the City now claims are
22 necessary solely for treatment of PCBs. Nott Davis Decl., Ex. 83, p. 6-5; Ex. 2
23 (“Davis Dep.”), 65:16-22. The BMPs listed include bioinfiltration swales (grass
24 percolation areas) built into “green belt areas in major developments, median strips

1 in major boulevards, edge strips on surface streets, or areas on private property.”
2 Nott Davis Decl., Ex. 83, p. 6-5. The Design Manual also identifies infiltration
3 galleries, absorption trenches, drywells, and sedimentation and detention structures
4 as appropriate. *Id.*, p. 6-5 – 6-6.

5 118. The 2007 MS4 NPDES Permits required the City to perform all
6 known, available and reasonable methods of prevention, control and treatment,
7 such as street sweeping at active construction sites prior to washing the street and
8 swales. Nott Davis Decl., Ex. 40, p. SPOKANE-PRR-0000853.

9 119. The 2014 MS4 NPDES Permit and the 2018 updated permit required
10 the City to all known and reasonable BMPs, such as swales. Both permits also
11 required the City to implement a monitoring program for phosphorous, ammonia,
12 and CBOD according to schedules in the permit. Nott Davis Decl., Ex. 42,
13 Appendix 2, p. SPOKANE-PRR-0000846-000087; Ex. 84, p. 7-8. “If the
14 monitoring results indicate that stormwater Waste Load Allocations are being
15 exceeded, then an adaptive management response to reduce pollutant loading shall
16 be initiated. The City of Spokane shall prepare an Action Plan.” Nott Davis Decl.,
17 Ex. 42, Appendix 2, at 8.

18 **IX. THERE IS NO FEDERAL OR STATE REQUIREMENT THAT THE**
19 **CITY LIMIT PCBs IN ITS WASTEWATER AND STORMWATER**
20 **DISCHARGE**

21 120. The City’s actions with respect to stormwater and wastewater
22 management are driven by permit requirements from the State of Washington.
23 Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 21:4-14.

24 121. There are two separate permits that apply to the City: the MS4
NPDES Permit and the Wastewater NPDES Permit. *See generally* Nott Davis

Decl., Exs. 39, 43. The Wastewater NPDES Permit regulates the effluent from the RPWRF and all CSO Outfalls. Nott Davis Decl., Ex. 85, p. 4. The MS4 NPDES Permit regulates the City’s MS4 system and all stormwater basins. *Id.*

122. Neither the MS4 NPDES Permit nor the Wastewater NPDES Permit contain a TMDL for PCBs. *See* Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 194:8-12; Ex. 22 (“Trapp Dep.”), 46:14 – 47:7; *see generally* Exs. 39, 43.

123. The City admits that it is not subject to any quantitative or numerical limit, at all, with respect to the discharge of PCBs into the Spokane River. Nott Davis Decl., Ex. 1 (“Hendron Dep.”) 233:3-5; Ex. 2 (“Davis Dep.”), 42:21-43:16.

124. The City is under no obligation to reduce the average concentration of PCBs in the Spokane River. *See* Nott Davis Decl., Ex. 22 (“Trapp Dep.”), 46:14 – 47:7; 52:3-20, 53:24 – 54:16.

125. The 2011 Wastewater NPDES Permit requires the City to participate in the Spokane River Regional Toxics Task Force (“Task Force”). Nott Davis Decl., Ex. 39, p. 53. The MS4 NPDES Permit does not require the City to participate in the Task Force. *See generally* Nott Davis Decl., Exs. 40, 41, 42, 43.

126. In January 2012, the City, the WDOE, and other organizations signed a Memorandum of Agreement (“MOA”) that formally established the Task Force. Nott Davis Decl., Ex. 52, p. 1.

127. Pursuant to the MOA, if the WDOE determines that the Task Force fails to make measurable progress toward meeting applicable water quality criteria for PCBs, it is obligated to “proceed with the development of a TMDL in the Spokane River for PCBs or determine an alternative to ensure water quality standards are met.” Nott Davis Decl., Ex. 52, p. 1-2.

1 128. Measurable progress occurs when the Task Force demonstrates that
2 there has been compliance with water quality standards. No TMDL for PCBs will
3 be issued so long as the Task Force demonstrates measurable progress. Nott Davis
4 Decl., Ex. 52, p. 3.

5 129. Section S4.F of the MS4 NPDES Permit also gives the City the option
6 to follow an “adaptive management plan compliance pathway”. Nott Davis Decl.,
7 Ex. 42, p. SPOKANE-PRR-0049933 – 49934. The City will remain in compliance
8 with Section S4.F of the MS4 NPDES Permit despite ongoing violations of water
9 quality standards if it creates and adheres to an approved adaptive management
10 plan. Nott Davis Decl., Ex. 22 (“Trapp Dep.”), 52:3-9; Ex. 42, p. SPOKANE-
11 PRR-0049933 – 49934.

12 130. In December 2009, the Spokane Riverkeeper served a notice of intent
13 to sue the City, alleging various violations of the Clean Water Act related to PCB
14 discharges by the City. Nott Davis Decl., Ex. 86, at 2:18-20.

15 131. On August 23, 2011, the City and Spokane Riverkeeper entered into a
16 Consent Decree in settlement of the Riverkeeper’s 2009 notice of intent to sue,
17 which imposes a series of obligations on the City, including compliance with the
18 “Adaptive Management Plan for Reducing PCBs in Stormwater Discharges,
19 March, 2011” (“AMP”).” Nott Davis Decl., Ex. 86, p. 6, 21-47.

20 132. In the City’s 2014 Annual Report: Adaptive Management Plan for
21 Reducing PCBs in Stormwater Discharges (“2014 Adaptive Management Plan”),
22 the City reported on actions taken in furtherance of its AMP: sampling for PCBs in
23 the Union Basin MS4 and surrounding areas contributing to a CSO Basin, PCB
24 sample analysis and source identification, and subsequent stormwater mitigation in

1 the Union Basin MS4. Nott Davis Decl., Ex. 85, p. 4, 13-14; Ex. 22 (“Trapp
2 Dep.”), 51:18 – 52:20. Union Basin was the most highly industrialized drainage
3 basin in the City and the plan did not identify stormwater mitigation projects in any
4 other location. *See* Nott Davis Decl., Ex. 85, p. 4, 13-14.

5 133. In addition to the Adaptive Management Plan, the City also
6 voluntarily undertook Supplemental Environmental Projects identified as:

7 Project 1: Low Impact Development;

8 Project 2: Rose Foundation payment

9 Project 3: Storm Drain Marking Program

10 Project 4: GIS Layer of locations and descriptions of City MS4 assets

11 Project 5: Stormwater Educational Guide funding to Spokane River
12 Forum

13 Nott Davis Decl., Ex. 85, p. 4, 17-18.

14 134. The City also identified projects related to, but separate from, its
15 Adaptive Management Plan: its Integrated Clean Water Plan, the Toxics
16 Management Plan, and the PCB Product Purchasing Ordinance. Nott Davis Decl.,
17 Ex. 85, p. 20-21; Nott Davis Decl., Ex. 91, 23:9-13.

18 135. In December 2014, the City published the Integrated Clean Water
19 Plan (“Integrated Plan”), which took a holistic approach to managing the City’s
20 discharges from the RPWRF, MS4 system, and CSO system. Nott Davis Decl.,
21 Ex. 76, p. “Message from Mayor Condon”. The Integrated Plan was “designed to
22 get enhanced results more quickly at a more affordable price” and to “deliver[] the
23 best value for the investment”. Nott Davis Decl., Ex. 76, p. “Message from Mayor
24 Condon”. The City is undertaking its infiltration projects outlined in the Integrated

1 Clean Water Plan to satisfy the requirements of the Spokane River DO TMDL, not
2 to address PCBs. Nott Davis Decl., Ex. 87, p. ix, 30-31.

3 136. The Integrated Plan included the Union Basin sampling, analysis and
4 infiltration project from the City's Adaptive Management Plan, as well as
5 additional stormwater projects such as green infrastructure projects, and low
6 impact development projects. Nott Davis Decl., Ex. 76, p. 6-2 – 6-4. But the City
7 recognized that there was no regulatory requirements for these stormwater projects,
8 explaining, "If the Integrated Clean Water Plan is not implemented, the City would
9 still be required to meet the regulatory requirements related to CSO reductions and
10 the NLT." *Id.*, p. SPOKANE-PRR-0050050.

11 137. In 2015, the USEPA established a compliance schedule for the Task
12 Force in response to a Court Order. Nott Davis Decl., Ex. 51, p. 11; *see* Nott Davis
13 Decl., Ex. 88. The purpose of the compliance schedule was to measure and
14 complete "the work of the Task Force, including quantifiable benchmarks, plans
15 for acquiring missing scientific information, deadlines for completed scientific
16 studies, concrete permitting recommendations for the interim, specific standards
17 upon which to judge the Task Force's effectiveness, and a definite endpoint at
18 which time Ecology must pursue and finalize its TMDL." Nott Davis Decl., Ex.
19 51, p. 11.

20 138. The USEPA recognized that it did not have authority "to establish a
21 legally enforceable schedule for either the Task Force or the State." Nott Davis
22 Decl., Ex. 51, p. 11.

23 139. The USEPA established the following compliance schedule:
24

- 1 • December 31, 2016: The Task Force completes a Comprehensive Plan
2 to bring the Spokane River into compliance with applicable water
3 quality standards for PCBs.
- 4 • December 15, 2020: Instream concentration of PCBs meets 200 pg/L
5 based on the annual central tendency of the preceding year.
- 6 • December 15, 2024: Instream concentration of PCBs meets 170 pg/L
7 based on the annual central tendency of the preceding year.
- 8 • December 15, 2027: The applicable water quality standards for PCBs
9 are met and the Spokane River and adjacent segments are no longer
10 included on Washington’s 303(d) list of impaired waters.

11 Nott Davis Decl., Ex. 51, p. 11-12.

12 140. In response to the compliance schedule, the Task Force issued the
13 Comprehensive Plan to Reduce Polychlorinated Biphenyls (PCBs) in the Spokane
14 River (“Comprehensive Plan”) on November 2016. *See* Nott Davis Decl., Ex. 54.
15 The Comprehensive Plan retroactively adopted the stormwater projects from the
16 Integrated Plan and rebranded them as projects that would contribute to the control
17 of PCBs in the Spokane River. *Id.*, p. 56-58; Ex. 76, p. 6-2 – 6-4

18 141. The Task Force did not need to take any action to meet the December
19 2020 and December 2024 deadlines because, as early as 2014, the average PCB
20 concentration in Spokane River at Nine Mile Dam just downstream of the City was
21 140ppq, below USEPA’s instream PCB goal of 200 ppq for 2020, below the
22 USEPAs instream PCB goal of 170ppq for 2024, and below the USEPA’s current
23 standard of 170 ppq, which USEPA set as a compliance goal for 2026. *See* Nott
24 Davis Decl., Ex. 1 (“Hendron Dep.”), 300:22- 301:13; Ex. 3 (“Coster Dep.”), 24:2-

8; Ex. 7 (“Bowdan Dep.”), 99:24 – 104:8. The average PCB concentration in Spokane River at Nine Mile Dam, just downstream of the City, was 140 ppq in 2014, 144 ppq in 2016, and 89.8 in 2018. Nott Davis Decl., Ex. 11 (“Dilks Dep.”), 22:22 – 23:7; Ex. 1 (“Hendron Dep.”), 300:22- 301:13, 304:3-6; Ex. 53, p. 15; Ex. 54, p. 11; Ex. 55, p. 10. Plaintiff’s expert J. Michael Trapp has devised a hypothetical “scenario,” which he admits is unprecedented and unreasonable, that it will cost the City \$289 million to “fully eliminate” the discharge of any stormwater whatsoever to the River from the City’s MS4. Nott Davis Decl., Ex. 177 (“Trapp & Bowdan Rpt.”), p 29-41.

X. THERE IS NO TMDL FOR PCBS IN THE SPOKANE RIVER

142. The Spokane River was subject to various TMDLs: 1992 TMDL for phosphorus, 1999 TMDL for zinc, lead and cadmium contamination, 2010 Dissolved Oxygen TMDL for phosphorus, cadmium, lead, zinc, ammonia, and BOD5. *See* Nott Davis Decl., Ex. 74; Ex. 1 (“Hendron Dep.”), 204:7 – 205:5, 205:13-22, 234:5 – 235:13; Ex. 7 (“Bowdan Dep.”), 105:12-19, 146:7-13.

143. The below chart summarizes the existing TMDLs for the Spokane River, and the dates they went into effect. Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 5; Ex. 3 (“Coster Dep.”), 51:20 – 52:11.

Spokane River Total Maximum Daily Loads (TMDLs)	
TMDL	Date of TMDL
Phosphorus TMDL	
Phosphorus	1992
Spokane River Dissolved Metals TMDL	
Cadmium	1999

Lead	1999
Zinc	1999
Spokane River and Lake Spokane Dissolved Oxygen TMDL*	
Biochemical Oxygen Demand (5 day) BOD ₅	2010
Total Phosphorous	2010
Ammonia	2010
*Incorporated into Eastern Washington Municipal Stormwater Permit	

144. The City admits that there is no current or former TMDLs for PCBs in the Spokane River. *See* Nott Davis Decl. (“Hendron Dep.”), 101:15 – 102:3; Ex. 2 (“Davis Dep.”), 61:13-62:24, 107:15-108:16; Ex. 7 (“Bowdan Dep.”), 105:8-11; Ex. 3 (“Coster Dep.”), 21: 17-21.

145. The annual load for other constituents of regulatory concern are: 341,940,000 lbs of raw sewage and untreated waste water, 700,000 lbs of zinc, 36,000 lbs of lead, 105,800 lbs of phosphorous, and 2,900 lbs of cadmium. Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 34.

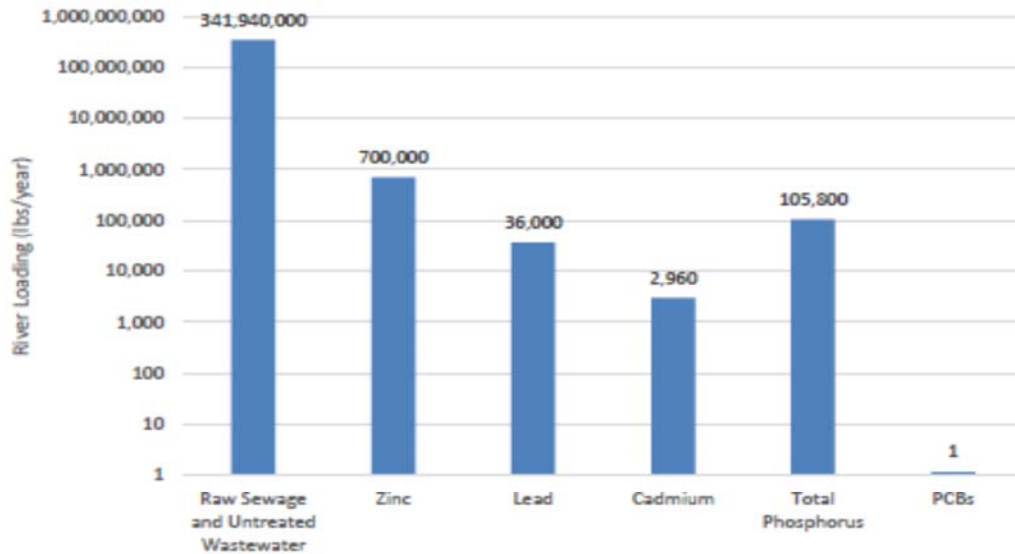


Chart 4.3 Annual River Loading of Sewage, Metals, Phosphorus, and Total PCBs to the Spokane River. The loadings of sewage, three commonly reported metals, phosphorus, and PCBs are plotted on log-scale to facilitate comparison between the several orders of magnitude difference between the amounts of metals and sewage and the relatively small amounts of PCBs in the river each year. The mass load of raw sewage and untreated wastewater was calculated using a density of 8.34 lbs/gallon and the discharge volume reported in SWWM (2019).

146. The above chart demonstrates the loading of other constituents in the Spokane River: Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 34.

147. The City permits others to discharge PCBs in the Spokane River. Nott Davis Decl., Ex. 180 (“Woodyard Rpt.”), 57-58. The USEPA also allows the use of PCBs in the Spokane River Watershed. *See* Nott Davis Decl., Ex. 89; Ex. 90.

XI. THE CITY HAS KNOWN FOR DECADES ABOUT THE PRESENCE OF PCBs IN THE SPOKANE RIVER AND ITS EFFLUENT

148. The City was first aware of the presence of PCBs in the Spokane River as early as 1984. Nott Davis Decl., Ex. 91, 5:13 – 6:16.

149. By the late 1980s or early 1990s, the City Director of Environmental Programs was aware of reports that PCBs were found in fish in the Spokane River. Nott Davis Decl., Ex. 91, 5:13 – 6:16.

150. On June 20, 1990, the City’s wastewater treatment plant was cited for

1 violations of the PCB regulations, and assessed a civil penalty of \$20,400. Nott
2 Davis Decl., Ex. 92, p. 2:19-22, 3:15-20, 3:23-24.

3 151. In or around 1999, a representative from Kaiser Aluminum notified
4 the City about Kaiser Aluminum tests which detected PCBs in the Spokane River.
5 Nott Davis Decl., Ex. 91, 5:13 – 6:16.

6 152. In 2001, the City became aware that it used PCB-containing electrical
7 equipment in 2001. *See generally* Nott Davis Decl., Ex. 93.

8 153. On December 20, 2001, Esvelt Environmental Engineering notified
9 the City that wastewater from nearby dischargers contained PCBs. *See generally*
10 Nott Davis Decl., Ex. 94. The WDOE took effluent samples from the County of
11 Spokane, Inland Empire Paper Co., Kaiser Aluminum and Chemical Co,
12 (Trentwood), and Liberty Lake Sewer District, and found that some samples
13 contained significant amounts of PCBs, ranging from 1,500 to 10,000 pg/L. Nott
14 Davis Decl., Ex. 94, LLSWD_SPO_TP00000212, 00000214, 00000215.

15 154. With the discovery of PCBs in the Spokane County’s wastewater
16 treatment facility, the City had no reason to believe that its effluent did not also
17 contain PCBs. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 335:21 – 337:2.

18 155. In or around December 2007, the WDOE published a report titled,
19 “Spokane River – PCB TMDL Stormwater Loading Analysis – Final Technical
20 Report,” which stated that “stormwater is considered the major ongoing contributor
21 of PCBs to the [Spokane River],” and that PCBs were manufactured by Monsanto
22 and have not been produced in the United States since 1977. Nott Davis Decl., Ex.
23 95, p. v, 1-2. The City received a copy of this report. *See* Nott Davis Decl., Ex. 95.

24 156. Lars Hendron, the City’s 30(b)(6) designee, testified that the City

1 became aware of the presence of PCBs in its storm water around 2007. Nott Davis
2 Decl., Ex. 1 (“Hendron Dep.”), 229:3-8.

3 157. In December 2009, the Spokane Riverkeeper served a notice of intent
4 to sue the City, alleging various violations of the Clean Water Act related to PCB
5 discharges by the City. Nott Davis Decl., Ex. 86, at 2:18-20.

6 158. On August 23, 2011, the City and Spokane Riverkeeper entered into a
7 Consent Decree in settlement of the Riverkeeper’s 2009 notice of intent to sue,
8 which imposes a series of obligations on the City, such as cash payments,
9 supplemental environmental projects, and compliance with the “Adaptive
10 Management Plan for Reducing PCBs in Stormwater Discharges, March, 2011”
11 (“AMP”).” Nott Davis Decl., Ex. 86, p. 6, 21-47.

12 159. In 2011, the City’s 2011 Wastewater NPDES Permit required the City
13 to participate in a Regional Toxics Task Force, the goal of which is to “develop a
14 comprehensive plan to bring the Spokane River into compliance with applicable
15 water quality standards for PCBs,” as well as other functions related to “other
16 toxics.” Nott Davis Decl., Ex. 39, p. 53.

17 160. On June 23, 2011, the City’s consultant informed Lars Hendron that:
18 “The City of Spokane’s stormwater collection contributes 44% of the total PCB
19 load to the Spokane River.” Nott Davis Decl., Ex. 96.

20 161. The City knew that the Industrial Park, City Parcel Site, GE Spokane
21 Site, Spokane Junkyard Site, Transformer Site had contained PCBs which could
22 enter the stormwater system. Nott Davis Decl., Ex. 180 (“Woodyard Rpt.”), 32-45.

23 162. As of June 2012, the City knew about PCBs in the Spokane River, and
24 knew or should have known about PCBs in its wastewater and stormwater systems

1 *See supra*, paras. 135-148.

2 **XII. THE CURRENT WATER QUALITY STANDARD FOR PCBs IN**
3 **THE SPOKANE RIVER IS 170 PPQ**

4 163. In 1999, the USEPA promulgated a PCB water quality standard based
5 upon a human health criteria of 170 parts per quadrillion (“ppq”). Nott Davis
6 Decl., Ex. 22 (“Trapp Dep.”), 13:17 – 14:6. This criteria was later adopted in the
7 Washington Administrative Code. WAC 173-201A-240.

8 164. In November 2016, the USEPA replaced this standard with a 7 ppq
9 standard. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 289:7-11; Ex. 22 (“Trapp
10 Dep.”), 14:21 – 15:1; Ex. 97, p. 64-67; 81 Fed. Reg. 85,417, at 85,419 (Nov. 28,
11 2016).

12 165. There is no USEPA-approved testing method capable of detecting
13 PCBs at levels as low as 7 ppq. Nott Davis Decl., Ex. 98; Ex. 22 (“Trapp Dep.”),
14 77:6-15, 78:11-16.

15 166. There are no commercially available technologies that can remove
16 PCBs to the 7 ppq water quality criteria level. Nott Davis Decl., Ex. 7 (“Bowdan
17 Dep.”), 81:22 – 83:15. The Mayor of Spokane stated: “That standard, at 7 ppq, is
18 unachievable with any current or anticipated technology.” Nott Davis Decl., Ex.
19 98.

20 167. From 2016 to 2018, the City sent multiple letters to the USEPA and
21 the WDOE stating that the 7 ppq water quality criteria for PCBs was
22 technologically and practically unattainable for the Spokane River. *See e.g.* Nott
23 Davis Decl., Ex. 1 (“Hendron Dep.”), 298:9-24; Ex. 98; Ex. 55. On August 1,
24 2016, in fulfillment of its obligations under section 303(c)(2)(B) of the Clean

1 Water Act, and the National Toxics Rule at 40 CFR 131.36, Washington’s
2 Department of Ecology (“Ecology”) submitted proposed water quality standards to
3 USEPA for review and approval, including a proposed human health criteria for
4 PCBs of 170 parts per quadrillion. *See* 81 Fed. Reg. 85,417.

5 168. According to Mayor Condon, the City took the position that the 170
6 ppq standard was safe. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 306:7-21; Ex.
7 98.

8 169. On May 10, 2019, the USEPA issued a notice of reversal of its prior
9 decision to set the standard for the Spokane River at 7 ppq and for the standard to
10 revert to 170 ppq. Nott Davis Decl., Ex. 22 (“Trapp Dep.”), 15:2-13; Ex. 99. The
11 USEPA has issued a notice of proposed rule-making and the comment period is
12 now closed. Ex. 99.

13 170. Chapter 173-201A-240 of the Washington Administrative Code
14 presently identifies the human health criteria for PCBs in the Spokane River at 170
15 ppq. Nott Davis Decl., Ex. 7 (“Bowdan Dep.”), 123:17 – 124:1; Ex. 22 (“Trapp
16 Dep.”), 15:14 – 18:1; WAC 173-201A-240.

17 171. The WDOE is charged with enforcing the 170 ppq PCB human health
18 criteria set forth in the Washington Administrative Code. Nott Davis Decl., Ex. 22
19 (“Trapp Dep.”), 28:8-10.

20 172. This water quality standard does not create a legal requirement for the
21 City to reduce the levels of PCBs in its effluent to below 7 ppq. Nott Davis Decl.,
22 Ex. 7 (“Bowdan Dep.”), 116:8-25, 117:1 – 118:23.

23 173. The City applied for an individual discharger variance from the
24 WDOE that would raise its quantitative discharge limit for PCBs to the highest

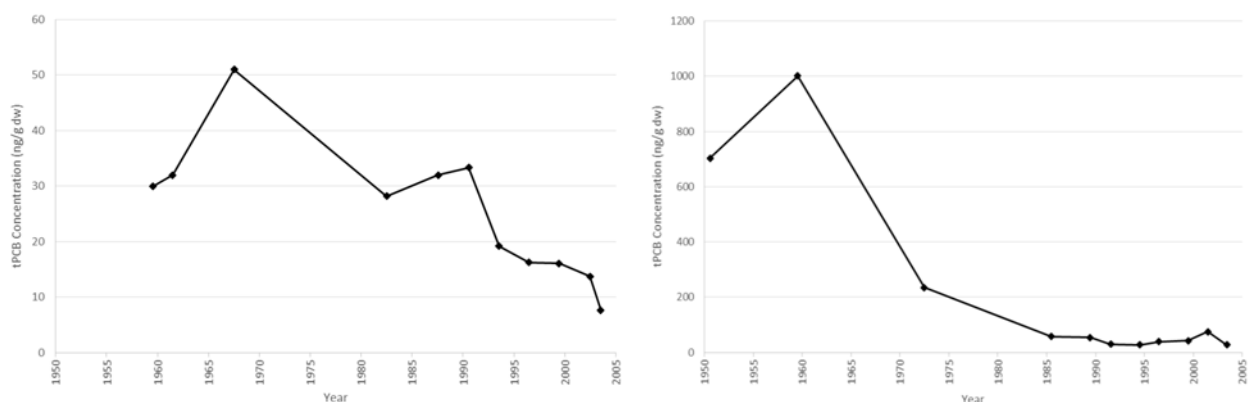
attainable effluent condition of 792 ppq. Nott Davis Decl., Ex. 3 (“Coster Dep.”), 76:1-11, 77:20-25, 78:1-7; Ex. 80, p. 1 (“Executive Summary”).

174. Joel Bowdan, the City’s expert on water treatment facilities, admits that he researched and referenced the 170 ppq standard set forth in Chapter 173-201A-240 in his expert report, but nevertheless based all his calculations on a 7 ppq standard. Nott Davis Decl., Ex. 7 (“Bowdan Dep.”), 125:2 – 126:9.

175. Mr. Bowdan admits that under the current 170 ppq standard, PCB loading from the City CSO outfalls was “not contributing in a significant way.” Nott Davis Decl., Ex. 7 (“Bowdan Dep.”), 92:10-25.

XIII. THE CITY’S DISCHARGE COMPLIES WITH THE CURRENT 170 PPQ STANDARD

176. Overall, PCBs in the Spokane River have been declining for the last 30 years for a number of reasons including: biodegradation of PCBs, and the rocky bed and rapid velocity of the Spokane River resulting in the River flushing itself constantly. Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 36-38; Ex. 56, p. 24-25. PCB levels in Spokane River are going down rapidly, reducing by half every ten years. Nott Davis Decl., Ex. 56 p. 107.



“Chart 4.6 Temporal Trend in Age-dated PCB Concentrations in Sediment Cores,

Upper Lake Spokane (Upper Panel) and Lower Lake Spokane (Lower Panel). dw = Dry Weight; tPCB = Total Polychlorinated Biphenyls. Adapted from WA Ecology (2011a).” Nott Davis Decl., Ex. 27 (“Herman Rpt.”), p. 38

Dilks Table 1 - <u>In ounces per year</u> Uncertainty Range in Parentheses Where Available			
<u>Delivery Mechanism</u>	<u>Current Loading Rate</u> (oz/year)	<u>2011-2012 Loading Rate</u> (oz/year)	<u>Baseline Loading Rate</u> (oz/year)
Upstream Boundary	19.00362654 (14.21084751 to 23.77063794)		
City of Spokane MS4	0.47670114	0.605539286	1.662012084
City of Spokane CSO	0.076014506	0.11466595	0.463817326
Wastewater Treatment Plants			
Inland Empire Paper	1.095124241 (1.069356612 to 1.108008056)	0.81168032	0.579771657
Spokane County	0.088898321 (0.077302888 to 0.100493754)	0.00489585	0
City of Spokane	0.992053724 (0.914750837 to 1.082240427)	1.327032904	2.499460033
Contaminated Groundwater	0.850331764	0.850331764	0.850331764
Spokane Hatchery	0.097916991	0.097916991	0.097916991
Tributaries			
Latah (Hangman) Creek	1.172427129 (1.069356612 to 1.301265275)		
Little Spokane River	1.004937539 (0.103070517 to 1.906804561)		
Bedded sediments	0.012883815 (0.000644191 to 0.257676292)	0.012883815 (0.000644191 to 0.257676292)	0.012883815 (0.000644191 to 0.257676292)
TOTAL Current Loading:		24.87091571 oz/year	

177. The above table identifies the sources of loads of PCBs to the River. Of the 1.5 pounds of annual loading of PCBs in the Spokane River from all sources, the City contributes only 1.54 ounces per year, a negligible 6% of that annual load. Nott Davis Decl., Ex. 25 (“Dilks Rpt.”), p. 3; Ex. 11 (“Dilks Dep.”), 11:23 – 13:12.

178. David Dilks, the City’s expert on sources of PCBs to the Spokane River, estimates that the total amount of PCBs entering the Spokane River from the City’s entire waste and stormwater systems (MS4, CSO, and RPWRF) is 0.004 ounces per day, or 1.54 ounces per year. Nott Davis Decl., Ex. 25 (“Dilks Rpt.”), at 3; Ex. 100; Ex. 11 (“Dilks Dep.”), 11:23 – 13:12.

179. The City contributes only 6% of the total PCB load into the Spokane

1 River. *See* Nott Davis Decl., Ex. 25 (“Dilks Rpt.”), p. 3. The remaining 94% of the
2 PCB load to the Spokane River is contributed by other sources, over which the
3 City has no control, including loads contributed by the State of Idaho of 1.18
4 pounds, Inland Empire Paper of 1.1 ounces and the Spokane County Wastewater
5 Treatment Plant of .09 ounces before the Spokane River reaches the City’s eastern
6 boundary. Nott Davis Decl., Ex. 25 (“Dilks Rpt.”), at 3; Ex. 100; Ex. 11 (“Dilks
7 Dep.”), 11:23 – 13:12.

8 180. The City contributes only 6% of the total PCB load into the Spokane
9 River. *See* Nott Davis Decl., Ex. 25 (“Dilks Rpt.”), p. 3.

10 181. There is no evidence that PCBs from landfills in the Spokane River
11 watershed enter the Spokane River. Nott Davis Decl., Ex. 4 (“Windsor Dep.”),
12 53:1-16, 55:15-18, 57:16 – 58:22, 59:9 – 60:4, 61:22 – 62:10, 63:11 – 64:6, 66:4-
13 15, 67:3-25, 69:15 – 70:17 , 71:4 – 73:19.

14 182. Testing performed by the Spokane River Regional Toxic Task Force
15 from 2014 through 2019 indicated that the Spokane River already complied with
16 the 170 ppq standard on an annual average basis. Nott Davis Decl., Ex. 3 (“Coster
17 Dep.”), 24:2-8, 25:23 – 27:14; Ex. 1 (“Hendron Dep.”), 300:22- 301:13; Ex. 7
18 (“Bowdan Dep.”), 99:24 – 104:8; Ex. 22 (“Trapp Dep.”), 102:25 – 103:7; Ex. 37,
19 p. PCB-SPOKANE-01199787; Ex. 54, p. 11. The average PCB concentration in
20 Spokane River at Nine Mile Dam, just downstream of the City, was 140 ppq in
21 2014, 144 ppq in 2016, and 89.8 in 2018. Nott Davis Decl., Ex. 11 (“Dilks Dep.”),
22 22:22 – 23:7; Ex. 1 (“Hendron Dep.”), 300:22- 301:13, 304:3-6; Ex. 53, p. 15; Ex.
23 54, p. 11; Ex. 55, p. 10.

24 183. Michael Trapp, the City’s proffered MS4 expert, admits that the River

1 complies with the 170 ppq standard as of 2016: the current arithmetic mean of
2 concentrations of PCBs in the Spokane River is approximately 144 ppq and the
3 geometric mean of concentration of PCBs in the Spokane River is approximately
4 132 ppq. Nott Davis Decl., Ex. 22 (“Trapp Dep.”), 102: 25 – 103: 7.

5 184. The City’s 30(b)(6) witnesses testified that the Spokane River
6 complies with the 170 ppq standard as of 2016 and 2018. Nott Davis Decl., Ex. 1
7 (“Hendron Dep.”), 304:3-10; Ex. 3 (“Coster Dep.”), 24:2-8, 25:23 – 27:1-14.

8 **XIV. THE FISH CONSUMPTION ADVISORY DOES NOT PROVE THAT**
9 **THE SPOKANE RIVER IS UNSAFE**

10 185. The Spokane River is subject to fish advisories for all species of fish
11 in all sections of the Spokane River due to multiple constituents, such as lead. Nott
12 Davis Decl., Ex. 5 (“Feist Dep.”), 337:12 – 338:7.

13 186. There would be a fish advisory in effect even if PCBs had never been
14 invented, except for one species, the invasive carp. *See* Nott Davis Decl., Ex. 5
15 (“Feist Dep.”), 337:12 – 338:7; Ex. 22 (“Trapp Dep.”), 39:10 – 40:21. The
16 invasive carp is an unwanted fish that authorities have been attempting to eradicate
17 because, among other reasons, it increases River phosphorous concentrations. Nott
18 Davis Decl., Exs. 101, 102, 103. Plaintiff’s stormwater system expert, Michael
19 Trapp, Ph.D., is not offering any opinions regarding whether or not his proposed
20 actions would remove PCB fish advisories because he is not a toxicologist and he
21 admits he has no basis to be able to perform that analysis. Nott Davis Decl., Ex. 22
22 (“Trapp Dep.”), 153:18-154:3.

23 187. In 2001, the fish consumption advisory was issued due to PCB
24 concentrations in Spokane River fish. Nott Davis Decl., Ex. 104, p. 5.

1 188. Beginning in 1996, the WDOE listed parts of the Spokane River on its
2 303(d) list of impaired and threatened waters due to existing fish advisories. Nott
3 Davis Decl., Ex. 105.

4 189. The USEPA recognizes in its Guidance for Assessing Chemical
5 Contaminant Data for Use in Fish Advisories, Vol. 2, that risk assessments
6 “provide[] an upper estimate of risk; the actual risk may be significantly lower and
7 may be as low as zero.” Nott Davis Decl., Ex. 106, p. 2-12.

8 190. Richard DeGrandchamp, one of the City’s proffered expert
9 toxicologists, testified that risk assessments, upon which fish advisories are based,
10 do not predict actual risk because they employ numerous conservative
11 assumptions: “It should be stressed that the use of uncertainty and modifying
12 factors represents risk policy and not necessarily science. That is, uncertainty is
13 always addressed by introducing an increasing amount of conservatism without
14 determining whether it is warranted or scientifically valid.” Nott Davis Decl., Ex.
15 10 (“DeGrandchamp Dep.”), 192:13 – 193:7.

16 191. James Olson, one of the City’s proffered expert toxicologists, testified
17 that association is not equivalent to causation, and that risk is simply an association
18 found in a scientific study that may or may not be causal. Nott Davis Decl., Ex. 15
19 (“Olson Dep.”), 15:15-25, 16:11-13.

20 192. PCB fish tissue concentrations in Spokane River are 7 times lower
21 than FDA food tolerances for fish. Nott Davis Decl., Ex. 180 (“Woodyard Rpt.”),
22 p. 16; Ex. 57, p. 10, Table 1.

23 193. Indeed, there are no scientific studies that purport to show that
24 consumption of fish from the Spokane River at the current PCB levels cause

1 human disease. Nott Davis Decl., Ex. 15 (“Olson Dep.”), 14:14-24; Ex. 8
2 (“Carpenter Dep.”), 122:19 – 123:3; Ex. 10 (“DeGrandchamp Dep.”), 69:13-17,
3 91:10 – 93:4, 123:19 – 125:11.

4 194. There are no scientific studies that purport to show that consumption
5 of fish from the Spokane River at the current PCB levels cause cancer. Nott Davis
6 Decl., Ex. 8 (“Carpenter Dep.”), 121:21 – 122:4, 122:5-16.

7 195. There are no studies or data that purport to show that PCBs at the
8 current levels in the Spokane River cause adverse effects on the mammals, birds,
9 or fish in Spokane River area. Nott Davis Decl., Ex. 10 (“DeGrandchamp Dep.”),
10 68:22-25, 69:2-7; Ex. 21 (“Schlenk Dep.”), 76:15 – 77:22.

11 196. None of the City’s experts performed a risk assessment for PCBs for
12 the consumption of fish from Spokane River. Nott Davis Decl., Ex. 15 (“Olson
13 Dep.”), 11:25-12:4; Ex. 10 (“DeGrandchamp Dep.”), 67:24 – 69:7; Ex. 8
14 (“Carpenter Dep.”), 79:8-12.

15 197. DeGrandchamp admits that he cannot cite to any study which purports
16 to demonstrate that the consumption of fish at the levels of PCBs in the Spokane
17 River cause human illness or disease. Nott Davis Decl., Ex. 10 (“DeGrandchamp
18 Dep.”), 91:10 – 93:4, 123:19 – 125:11. And he has no knowledge of a single
19 individual who became sick from eating fish from the Spokane River. Nott Davis
20 Decl., Ex. 10 (“DeGrandchamp Dep.”), 69:8-17, 202:11-18.

21 198. James Olson, the City’s expert toxicologist, admits that he cannot
22 “identify any study that purports to show the consumption of fish as the PCB
23 concentrations found in the Spokane River may cause any human disease or
24 adverse outcomes.” Nott Davis Decl., Ex. 15 (“Olson Dep.”), 14:14-29.

1 199. The City is unaware of any individual claiming an adverse health
2 effect from the PCBs in the Spokane River. Nott Davis Decl., Ex. 5 (“Feist Dep.”),
3 177:14-18, 381:3-10.

4 200. The City does not own the fish in the Spokane River. Nott Davis
5 Decl., Ex. 5 (“Feist Dep.”), 653:23 – 654:7. The City is not a trustee of the River
6 or the sediment in the River *Id.*, 894:20 – 895:4.

7 201. Today, the Spokane River is cleaner than it was 50 years ago and is
8 now a premier community asset. Nott Davis Decl., Ex. 5 (“Feist Dep.”), 63:3-25.

9 202. The City actively promotes use of the Spokane River for recreation
10 and tourism purposes, and touts it as a recreational resource. Nott Davis Decl., Ex.
11 5 (“Feist Dep.”), 68:24 – 69:2, 152:5-12. Recreational uses for the River have
12 increased since the 1970s. Nott Davis Decl., Ex. 5 (“Feist Dep.”), 163:13-164:12;
13 *see generally* Ex. 107; Ex. 108. This is inconsistent with the City’s position that
14 PCBs have made the river unsafe. *See* ECF No. 1 at 28:6-7.

15 203. The City and its Mayor unequivocally made clear that PCB levels in
16 the Spokane River are safe. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 296:14 –
17 298:12; Ex. 98.

18 **XV. THE CITY’S DAMAGES ARE NOT RELATED TO PCBs**

19 204. The City’s damages claims fall within four categories: past costs
20 related to the Riverkeeper Consent Decree; past costs related to the City’s
21 participation in the Toxics Task Force; and past and future costs related to the
22 City’s MS4 projects; and future costs for the operation of the NLT. *See* Nott Davis
23 Decl., Ex. 44. The City’s experts believe that it would cost over \$288 million to
24 “fully eliminate the discharge of PCBs” from the City’s MS4 and over \$1.6 million

1 in costs for “30 year monitoring.” Trapp/Bowdan Rpt. at 29-40.

2 205. The RPWRF upgrades, CSO storage basins, NLT, MS4 basins, and
3 stormwater management projects were all considered years before PCBs were even
4 discovered in the Spokane River. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 86:14
5 – 87:15, 138:5-11, 138:21-24, 139:8 – 140:17; Ex. 2 (“Davis Dep.”), 101:18-102:6.

6 206. The City is required to meet the requirements for controlled CSO
7 events set forth in the Wastewater NPDES Permits regardless of PCB levels in its
8 effluent. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 21:4-14; Ex. 39, p. 44.

9 207. The City admits that its actions to control CSO events and construct
10 the NLT membrane were driven by permits and would have been necessary even if
11 PCBs were never invented. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 228:6-20.

12 208. Damages related to or arising from the City’s involvement with the
13 Task Force are unrelated to MS4 projects or stormwater mitigation because the
14 MS4 NPDES Permit does not require the City to participate in the Task Force. *See*
15 Nott Davis Decl., Ex. 41.

16 209. The City admits that none of the engineering or design elements
17 related to its construction of the NLT, MS4 projects, or CSO reduction plan were
18 implemented because of PCBs. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 86:14 –
19 88:16, 96:11-23, 132:9 – 133:19, 214:4 – 215:3, 228:6-20. That is, the City’s
20 storm and waste water system upgrades would have been the same if PCBs had
21 never been invented. *See id.*

22 210. Marcia Davis, the City’s 30(b)(6) designee, testified, “There’s no
23 specific design aspects or elements [in City MS4 projects] that are added to or
24 specifically for PCBs.” Nott Davis Decl., Ex. 2 (“Davis Dep.”), 63:18-65:18.

1 There are no design elements in any of the City’s MS4 projects that are designed
2 uniquely to address PCBs. Nott Davis Decl., Ex. 2 (“Davis Dep.”), 74:9-75:2.
3 Nothing about conveyance systems or drywells are designed just for PCBs. Nott
4 Davis Decl., Ex. 2 (“Davis Dep.”), 100:10-101:14.

5 211. This admission is further supported by the representation by WDOE,
6 working in conjunction with the City, that the City is undertaking its infiltration
7 projects outlined in the Integrated Clean Water Plan to satisfy the requirements of
8 the Spokane River DO TMDL, not to address PCBs. Nott Davis Decl., Ex. 87, p.
9 ix, 30-31.

10 212. The City admits that the BMPs incorporated in the MS4 projects,
11 which comprise the majority of the damages in this case, were recognized over the
12 years and are not uniquely devoted to removing PCBs. Nott Davis Decl., Ex. 2
13 (“Davis Dep.”), 101:18-102:6; Ex. 91, 20:18-20.

14 **XVI. THE CITY HAS ALREADY BEEN REIMBURSED FOR ITS**
15 **DAMAGES**

16 213. The City concedes that none of its CSO-related costs were incurred
17 because of PCBs. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 228:6-20; ECF No.
18 343 at 3.

19 214. Regarding the City’s past damages for its MS4 projects, Marcia
20 Davis, the City’s 30(b)(6) designee, testified that the City has received over \$10
21 million of its claimed \$17 million in damages for past projects from WDOE grants,
22 and about \$15 million towards its future planned projects from the State. Nott
23 Davis Decl., Ex. 2 (“Davis Dep.”), 114:4 – 115:3, 140:24 – 141:12, 156:10 –
24 157:2, 173:16-24, 202:25 – 203:9, 220:19 – 221:5, 228:2-7, 233:3-16.) Ms. Davis

also testified that the City generally does not undertake a project without state funding, and that she anticipates that all future projects will be funded at a 75% of cost level. Nott Davis Decl., Ex. 2 (“Davis Dep.”), 32:25 – 33:23, 186:23 – 187:4.

215. Regarding its future damages, Ms. Davis testified that “When we [the City] apply for [State grants] we generally are successful to the limit of the \$5,000,000 we’re allowed each year.” Nott Davis Decl., Ex. 2 (“Davis Dep.”), 175:3-9, 185:12 – 186:4, 202:13-18.

216. The chart below summarizes the various projects for which the City seeks past damages, and moneys it has already received from state grants: Nott Davis Decl., Ex. 91, Appendix B.

Project Name	Claimed Past Costs	Grant Amounts
Cochran Basin - Boat Launch	\$1,828.68	
Cochran Basin - Piping TJ Meenach to Downriver	\$3,257.74	\$4,239,615.00
Cochran Basin - Piping TJ Meenach to NW Blvd	\$257.22	
Cochran Basin RRR	\$1,040,576.83	
Erie and Trent Stormwater	\$563,722.91	\$1,031,447.50
Finch LID	\$270,333.32	\$99,600.00
Indiana Phase 1	\$392,765.84	
Indiana Phase 2	\$531,952.35	
North Monroe	\$693,930.34	\$1,706,250.00

Pettet Drive	\$1,533,169.62	\$450,000.00
River Runoff Reduction	\$1,862,489.20	
Rowan Ave Phase 1	\$420,742.59	
RPWRF (Riverside) LID	\$603,112.75	\$347,625.00
Sharp Avenue	\$3,385,397.93	\$1,260,000.00
Summit Nettleton Infiltration Facility	\$565,025.57	\$342,000.00
Union Basin Stormwater Improvements	\$1,142,285.12	\$1,000,000.00
Washington Stormwater Basin	\$84,806.76	
PCB-fungi	\$68,340.36	
Storm Water Curb Markers	\$105,626.07	
Spokane River Regional Toxics Task Force	\$620,057.32	
Consent Decree	\$178,479.63	
PCB Testing	\$530,208.77	
Integrated Water Plan	\$1,570,873.54	
Loans	\$132,458.34	
PCB Sample and Cleanup	\$379,765.21	
Green Bond	\$200,133.28	
Biochar	\$27,932.00	
Total:	\$16,909,529.29	\$10,476,537.50

“Storm water Curb Markers” refers to the installation of various signs near curb drains that lead to the CSO and MS4 systems - which caution against dumping

1 wastes, and which the City claims were installed as “part of the City’s consent
2 decree related to PCB pollution migration.” Nott Davis Decl., Ex. 91, 22:7-11.

3 217. At present, the City has received \$10.5 million in grant funding for
4 MS4 projects. *See* Nott Davis Decl., Ex. 91, Appendix B.

5 **XVII.THE CITY’S MS4 PROJECT COSTS ARE UNRELATED TO PCBS**

6 218. The City undertook multiple green infrastructure projects and
7 constructed MS4 basins in an effort to reduce the flow of stormwater into the
8 combined sewer system and to limit CSO events. Nott Davis Decl., Ex. 2 (“Davis
9 Dep.”), 263:3-16, 271:3-25, 272:1-3. The City’s loan documents state that the
10 purpose of these projects was to prevent CSO events. *See generally* Nott Davis
11 Decl., Exs. 109, 110, 111, 112, 113.

12 219. The City now seeks \$16,909,529.29 in past damages and
13 \$34,118,199.00 in future damages for stormwater green infrastructure projects
14 meant to help reduce CSO events, and for best management practices, which were
15 recommended as early as the 1970s. Nott Davis Decl., Ex. 44; Ex. 91, Appendices
16 A, C; *See* Nott Davis Decl., Ex. 81. In the early stages of discovery, the City
17 claimed over \$390 million in damages for past and future costs. *See* Nott Davis
18 Decl., Exs. 178 , 179.

19 220. Marcia Davis, a principal engineer for the City and the City’s 30(b)(6)
20 witness, admits that the best management practices incorporated into the City’s
21 MS4 projects are not uniquely designed to address PCBs alone. Nott Davis Decl.,
22 Ex. 2 (“Davis Dep.”), 63:18-65:18, 74:9-75:2.

23 221. As City employee, Acting Director of Communications, Marlene Feist
24 testified, the implementation of projects recommended in the City’s ICWP would

1 eliminate only 29 grams -- less than one ounce -- of PCBs from the City's
2 stormwater and wastewater each year, but it would remove 121,900 pounds of
3 phosphorous, 897,000 billion CFU of fecal coliform, approximately 1.5 million
4 pounds of total suspended solids, and 1,070 pounds of zinc. Nott Davis Decl., Ex.
5 5 ("Feist Dep."), p. 730:15-732:6. Ms. Davis testified that the best management
6 practices used by the City in its MS4 projects are the same as those recognized and
7 developed by 1976, if not sooner. Nott Davis Decl., Ex. 2 ("Davis Dep."), 82:2-
8 18. For example:

- 9 • The North Monroe projects used the same bio-infiltration BMP
10 described in the 1970s and 80s, *id.*, 131:14-133:6;
- 11 • The River Runoff Reduction project used drywells, a decades-old
12 technology, *id.*, 133:12 – 134:10; and,
- 13 • The Pettet Drive project used the same bio-swales described in the
14 1970s and 80s, *id.*, 140:24-142:17.

15 222. Ms. Davis admits that some of the MS4 projects did not relate to
16 PCBs at all:

- 17 • For the Sharp Avenue project documents do not include testing for
18 PCBs, *id.*, 125:4-127:2;
- 19 • For the Cochran Basin RRR project, CH2M tested for numerous
20 constituents, but not PCBs, *id.*, 176:4-179:9; this admission is further
21 supported by the representation by WDOE, working in conjunction
22 with the City, that the City is undertaking its Cochran Basin
23 infiltration projects to satisfy the requirements of the Spokane River
24

1 DO TMDL, not to address PCBs, Nott Davis Decl., Ex. 87, p. ix, 30-
2 31;

- 3 • The Erie and Trent project documents do not mention removal of
4 PCBs as an intended benefit of the project, Nott Davis Decl., Ex. 2
5 (“Davis Dep.”), 221:10-224:18;
- 6 • The Finch LID parking lot expansion documents to not list PCBs, *id.*,
7 228:2-231:25; and,
- 8 • The Broadway SURGE project was done for CSO compliance, not for
9 PCBs, *id.*, 260:6-12.

10 223. Ms. Davis also admits that some of the MS4 projects have no
11 stormwater management benefits:

- 12 • The City’s damages claim relating to the Summit Nettleton project
13 includes aesthetic elements (e.g. bushes, rock veneer) and elements
14 that have no stormwater function (e.g. park benches), (*id.*, 215:4-
15 220:16);
- 16 • Security fence, *id.* 171:4-18; and,
- 17 • Interior electrical work; *id.*, 26:9-13.

18 224. The City’s 30(b)(6) designees concede that none of the design
19 elements of the MS4 projects were included because of PCBs. Nott Davis Decl.,
20 Ex. 1 (“Hendron Dep.”), 214:21-25, 215:1-3; Ex. 2 (“Davis Dep.”), 63:18 – 65:18,
21 74:9 – 75:2.

22 **XVIII. THE CITY’S GREEN BONDS WERE NOT DRIVEN BY PCBs**

23 225. Beginning in 2014, the City issued bonds to finance capital projects to
24 improve the health of the Spokane River and to make other improvements to the

1 City's Water and Wastewater System. Nott Davis Decl., Ex. 114, p. 1.

2 226. The City issued approximately \$181,225,000 in water and wastewater
3 system revenue bonds ("Green Bonds"). *See* Nott Davis Decl., Ex. 114, p. 1.

4 227. The City plans to use the proceeds of the Green Bonds to pay for
5 improvements identified in its Integrated Clean Water Plan and for other
6 wastewater and stormwater projects. Nott Davis Decl., Ex. 114, p. 13; Ex. 91,
7 23:24-25; 41:17-18.

8 228. The City's Official Bond Statement explains that the City's
9 "[Wastewater NPDES Permit] requires significant capital construction in the next
10 few years to: (i) Control CSO events by the end of 2017, (ii) Add tertiary treatment
11 (also known as Next Level of Treatment) at the Treatment Facility and achieve
12 effluent standards by March 2021. A Spokane River [TMDL] addressing dissolved
13 oxygen levels also necessitates this work. In 2014, the City received approval from
14 the WDOE for its updated CSO control plan and its Next Level of Treatment
15 Engineering Report/Wastewater Facilities Plan Amendment No. 3 to address these
16 requirements." Nott Davis Decl., Ex. 114, p. 18. None of the stated reasons have
17 anything to do with PCBs.

18 229. The City seeks to recover \$200,133.28 in damages related to bonds
19 the City issued in 2014. Nott Davis Decl., Ex. 91, Appendix A. The City
20 previously sought \$358,447.66 in damages. *See* Ex. 91.

21 **XIX. THE CITY'S NLT OPERATION COSTS ARE UNRELATED TO**
22 **PCBS**

23 230. The City now seeks \$30,719,000 for NLT operation costs and
24 \$6,768,000 for NLT Membrane Replacement costs. Nott Davis Decl., Ex. 91,

1 Appendix C; Ex. 177 (“Trapp & Bowdan Rpt.”), p. 62. The City contends that it
2 will have to continue to run the NLT facility during the non-critical season in order
3 to “continue to remove PCBs to the lowest level attainable.” *Id.*

4 231. The City cannot incur any costs for year-round operation until the
5 non-critical season after the NLT becomes operational on March 1, 2021. Nott
6 Davis Decl., Ex. 1 (“Hendron Dep.”), 264:9-15.

7 232. The City claims that the use of chemicals like sodium hypochlorite is
8 necessary in order to operate the NLT membrane in the non-critical season.
9 However, the City has no specific information concerning: the number of gallons
10 of sodium hypochlorite needed per batch, Nott Davis Decl., Ex. 5 (“Feist Dep.”),
11 911:18-25; if the cost of the sodium hypochlorite was ever calculated, *id.*, 911:2-5;
12 or the amount of sodium hypochlorite necessary to preserve the membrane system
13 if it did not operate during the non-critical season, *id.*, 910:8-17.

14 233. The installation and operation of the NLT system is subsidized by
15 Spokane County. The County is responsible for 10/44ths of the cost for the NLT
16 program because it sends 10 million gallons of additional sewage to the RPWRF
17 on an annual basis. Nott Davis Decl., Ex. 5 (“Feist Dep.”), 916:2-14. Since at least
18 2012, the County has paid 22.73% of the City’s NLT capital costs. Nott Davis
19 Decl., Ex. 5 (“Feist Dep.”), 923:3-7, 13-16. The City is currently negotiating with
20 the County concerning the cost allocations for future NLT operation and the
21 contribution level from the county could be higher with respect to future NLT
22 operating costs. Nott Davis Decl., Ex. 5 (“Feist Dep.”), 920:19 – 921:8.

23 Notwithstanding, the City now seeks the full cost from Monsanto. Nott Davis
24 Decl., Ex. 5 (“Feist Dep.”), 920:7-12.

1 234. The City does not know what effect an additional 10 million gallons
2 of treatment will have on the NLT membrane life. Nott Davis Decl., Ex. 5 (“Feist
3 Dep.”), 923:16-21.

4 235. The City does not know with any certainty what its labor costs will be
5 because it has never operated an NLT membrane. Pall Corporation recommended
6 an extra operator for each shift (three shifts), and an extra maintenance worker for
7 the day shift, above and beyond current employment levels to operate the NLT
8 system. Nott Davis Decl., Ex. 3 (“Coster Dep.”), 60:18-25, 61, 62:1-5. The
9 number of employees that the City plans to use to operate the NLT system is still
10 an open question. Nott Davis Decl., Ex. 3 (“Coster Dep.”), 59: 24-25, 60:10-13.

11 236. The new employees would be hourly workers, not salaried employees.
12 Nott Davis Decl., Ex. 3 (“Coster Dep.”), 62:11-14. The City has no knowledge on
13 hourly wages of employees at the NLT facility. Nott Davis Decl., Ex. 5 (“Feist
14 Dep.”), 932:18-25, 933: 6-17.

15 237. The City has not started to recruit for either NLT operator or NLT
16 maintenance employee positions. Nott Davis Decl., Ex. 3 (“Coster Dep.”), 68:19-
17 25, 69:1-4.

18 238. The City admits that it is budgeting the same way for the NLT
19 membrane replacement costs regardless of PCBs. Nott Davis Decl., Ex. 5 (“Feist
20 Dep.”), 928:15-929:3.

21 **XX. WHAT ARE PCBs?**

22 239. The original Monsanto Company, now Pharmacia LLC (hereinafter
23 “Monsanto”), manufactured polychlorinated biphenyls (PCBs) from approximately
24 1935 to 1977 for sale to sophisticated users. Nott Davis Decl., Ex. 29 (“Matson

1 Rpt.”), p. 7; Ex. 32 (“Reitman Rpt.”), p. 7.

2 240. PCBs are a class of 209 compounds, called congeners, consisting of
3 chlorinated hydrocarbons with a biphenyl nucleus on which one to ten of the
4 hydrogens have been replaced, by chemical reactions, with chlorine. Nott Davis
5 Decl., Ex. 29 (“Matson Rpt.”), p. 7; Ex. 32 (“Reitman Rpt.”), p. 9; Ex. 23
6 (“Carpenter Rpt.”), p. 4. PCB molecules in the environment are invisible to the
7 naked eye and have no smell. *Town of Westport v. Monsanto Co.*, 877 F.3d 58, 66
8 (1st Cir.2017).

9 241. Monsanto began the manufacture and sale of PCB mixtures in 1935
10 when it purchased the Swann Chemical Company. The Monsanto PCB mixtures
11 were sold under the registered trademark of Aroclor. The Monsanto PCB-
12 containing Aroclor numbers included 1016, 1221, 1232, 1242, 1248, 1254, 1260,
13 1262, and 1268. Each PCB-containing Aroclor was a pure PCB product comprised
14 of a mixture of different PCB congeners. With the exception of 1016, the last two
15 digits of the Aroclor series number correspond to the percent of chlorine. For
16 example, Aroclor 1254 contains 54% chlorine by weight. Nott Davis Decl., Ex.
17 115, p. 5, 10; Ex. 29 (“Matson Rpt.”), p. 7-9; Ex. 32 (“Reitman Rpt.”), p. 7, 9-10;
18 Ex. 23 (“Carpenter Rpt.”), p. 4.

19 242. PCBs were a useful industrial product sold in bulk to sophisticated
20 manufacturers of electrical and other industrial equipment, such as transformers
21 and capacitors, as well as manufacturers of some building products. Nott Davis
22 Decl., Ex. 32 (“Reitman Rpt.”), p. 8, 17-19; Ex. 29 (“Matson Rpt.”), p. 10-13.

23 243. PCB production in the United States began in response to the
24 electrical industry’s need for improved dielectric insulating fluids which would

1 also provide increased fire resistance when used in transformers and capacitors.
2 Nott Davis Decl., Ex. 29 (“Matson Rpt.”), p. 11-12. As the unique functional
3 characteristics of these materials became more fully understood additional uses
4 were found. Nott Davis Decl., Ex. 32 (“Reitman Rpt.”), p. 10-11, 14. Their non-
5 flammability made them an excellent choice in high pressure hydraulic
6 applications associated with high risk of fire such as die casting and steel
7 production. Nott Davis Decl., Ex. 29 (“Matson Rpt.”), p. 12; Ex. 8 (“Carpenter
8 Dep.”), 27:3-22. Their thermal stability and non-flammability were valuable in
9 heat transfer systems. Id. Their non-flammability, thermal stability and viscosity
10 characteristics made their use desirable in hot melt adhesives and other plasticizer
11 applications. Nott Davis Decl., Ex. 32 (“Reitman Rpt.”), p. 33; Ex. 116, p. 147.

12 244. PCBs therefore evolved as a unique class of chemicals which met
13 important needs for both industry and society. In many instances fire and building
14 codes required PCBs for the protection of life and property. Nott Davis Decl., Ex.
15 14 (“Nelson San Diego Dep.”)¹, 75:15-24, 76:22 – 77:6, 112:17-25, 113:7-17.

16 245. “Being virtually free of fire and explosion hazards, PCBs [were] used
17 [as dielectric fluids in transformers and capacitors] where failures of oil-insulated
18 transformers would present a potential danger to life and property. PCBs also
19 [were] superior to oils in reliability, in making small equipment possible, and in
20 assuring long life and reliability to equipment.” Nott Davis Decl., Ex. 115, p. 12.

21
22 ¹ Plaintiff’s counsel agreed that, in lieu of defense counsel deposing Nelson again
23 on essentially an identical expert report, Monsanto could rely upon his San Diego
24 deposition testimony in this Spokane case. Nott Davis Decl., Ex. 117.

1 246. The City’s experts agree that PCBs had many useful properties and
2 were included by manufacturers and formulators in a wide array of products
3 including transformers, capacitors, caulks and sealants. Nott Davis Decl., Ex. 29
4 (“Matson Rpt.”), p. 10-13; Ex. 31 (“Olson Rpt.”), p. 4; Ex. 24 (“Coghlan Rpt.”), p.
5 6-7.

6 247. Monsanto shipped its raw PCBs in bulk to product manufacturers or
7 formulators. Nott Davis Decl., Ex. 32 (“Reitman Rpt.”), p. 8, 17-19; Ex. 29
8 (“Matson Rpt.”), p. 10-13. Transformer and capacitor manufacturers, such as GE
9 and Westinghouse, and manufacturers using PCBs in their industrial equipment,
10 such as Kaiser Aluminum, were large sophisticated companies, which employed
11 large staffs of scientists who determined which dielectric fluids to use with their
12 products. Nott Davis Decl., Ex. 29 (“Matson Rpt.”), p. 11-12; Ex. 32 (“Reitman
13 Rpt.”), p. 17-19; Ex. 20 (“Rosner Dep.”), 17:6-23, 45:15 – 46:23, 51:15 – 51:6.

14 248. PCBs were produced in many countries, including: USA (1930-
15 1977); West Germany (1930-1983); Russian Federation (1939-1993); France
16 (1930-1984); United Kingdom (1954-1977); Japan (1954-1972); Italy (1958-
17 1983); Democratic Republic of Korea (1960s-2012); Spain (1955-1984); former
18 Czechoslovakia (1959-1984); China (1965-1980); Poland (1966-1977). Nott Davis
19 Decl., Ex. 118, p. 72, Table 1.14; Ex. 115, p. 84; PCBs were also manufactured in
20 Poland, East Germany and Austria in unknown amounts. Nott Davis Decl., Ex.
21 119, p. 183.

22 249. In 1966, PCBs were first detected in the environment by Swedish
23 scientists using experimental equipment. See Nott Davis Decl., Ex. 120, p. 123;
24 Ex. 9 (“Coghlan Dep.”), 158:15 – 159:12.

1 250. In 1970, in response to growing information regarding PCBs in the
2 environment, Monsanto began to voluntarily phase out the sale of PCBs for various
3 applications. Nott Davis Decl., Ex. 121. Sales of PCBs for use in building products
4 such as caulk were phased out as of August 1970. Nott Davis Decl., Ex. 122. By
5 1972, Monsanto had ceased the manufacture and sale of PCBs for all uses other
6 than as a dielectric fluid for use in enclosed electrical equipment. Nott Davis Decl.,
7 Ex. 29 (“Matson Rpt.”), p. 11, 15.

8 251. Sales of PCBs for electrical equipment continued because, according
9 to the United States Government and the electrical industry, a cessation of sales
10 would shut down the United States electrical power grid and cripple United States
11 industry. Nott Davis Decl., Ex. 115, p. 4; Ex. 123.

12 252. Monsanto voluntarily ended the manufacture and sale of PCBs for all
13 uses in 1977 after the electrical industry identified alternative dielectric fluids. Nott
14 Davis Decl., Ex. 29 (“Matson Rpt.”), p. 9-10; Ex. 30 (“Nelson Rpt.”), p. 8, 27.
15 Before that time, the termination of sales for dielectric uses would have resulted in
16 severe economic and social dislocation. See Nott Davis Decl., Ex. 30 (“Nelson
17 Rpt.”), p. 8; Ex. 124 p. GPFOX0034593; Ex. 123, p. PCB-ARCH0064837.
18 Indeed, GE told Monsanto that the unavailability of these materials would result in
19 serious power blackouts. Nott Davis Decl., Ex. 123, p. PCB-ARCH0064837.

20 253. Monsanto provided its customers with many technical bulletins
21 describing the chemical properties of its Aroclors, such as their vapor pressure and
22 solubility, as well as their toxicity. Nott Davis Decl., Ex. 32 (“Reitman Rpt.”), p.
23 11-12.

24 254. Monsanto provided its customers with many technical bulletins

1 describing the chemical properties of its Aroclors, such as their vapor pressure and
2 solubility, as well as their toxicity. Nott Davis Decl., Ex. 32 (“Reitman Rpt.”), p.
3 11-12.

4 255. In 1979, the Environmental Protection Agency (“USEPA”), as
5 required by the Toxic Substances Control Act of 1976 (“TSCA”), restricted the
6 manufacture, processing, use, and distribution of PCBs to specifically exempted
7 and authorized activities. Nott Davis Decl., Ex. 30 (“Nelson Rpt.”), p. 8; Ex. 20
8 (“Rosner Dep.”) 32:14-25, 33:2-4, 39:11 – 40:6. For the first time, cleanup and
9 disposal of liquid PCBs and other PCB items became strictly regulated by the
10 federal government, pursuant to 40 C.F.R. 761. Nott Davis Decl., Ex. 30 (“Nelson
11 Rpt.”), p. 8; Ex. 20 (“Rosner Dep.”) 32:14-25, 33:2-4, 39:11 – 40:6.

12 256. Monsanto has never manufactured PCBs in Washington State. *See*
13 Nott Davis Decl., Ex. 29 (“Matson Rpt.”), p. 7-8.

14 257. Monsanto has never discharged PCBs into the Spokane River. Nott
15 Davis Decl., Ex. 180 (“Woodyard Rpt.”), 45.

16 **XXI. PCBs ARE PRODUCED TODAY INADVERTENTLY IN**
17 **MANUFACTURING PROCESSES, ARE PRESENT IN MANY**
18 **CONSUMER AND INDUSTRIAL PRODUCTS, AND ARE**
PERMITTED BY THE USEPA

19 258. PCBs are unintentionally created through 100s of manufacturing
20 processes involving heat, carbon and chlorine, as well as by simple
21 combustion/incineration (hereinafter, “byproduct PCBs”). Nott Davis Decl., Ex.
22 54, p. 9; Ex. 17 (“Rodenburg Dep.”), 43:6-14, 51:4-6, 57:12 – 58:25, 61:4 – 63:25;

1 Ex. 18 (“Rodenburg San Diego Dep.”)², 18:21 – 19:11, 28:6-34:4.

2 259. Byproduct PCBs are ubiquitous in the air worldwide. Nott Davis
3 Decl., Ex. 33 (“Rodenburg Rpt.”), p. 5; Ex. 17 (“Rodenburg Dep.”), 38:13-20.

4 260. The Spokane River contains byproduct PCBs. Nott Davis Decl., Ex. 1
5 (“Hendron Dep.”), 310:5-8. Inadvertent PCBs are “a very challenging pollutant to
6 reduce.” Nott Davis Decl., Ex. 125, p. 1.

7 261. Up to 375 different products, and 200 manufacturing processes have
8 been identified as generating byproduct PCBs. See generally Nott Davis Decl., Ex.
9 126, p. 2825; Ex. 18 (“Rodenburg San Diego Dep.”), 24:14-21, 28:6 – 34:4, 54:14-
10 24, 55:15 – 56:5; Ex. 17 (“Rodenburg Dep.”), 36:16-24, 43:6-14, 258:15 – 259:10
11 (the SRRTTF has reported that PCBs in the effluent of the Inland Empire Paper
12 facility “correlated with [byproduct] PCBs in pigments used on the paper products
13 they recycle such as newspapers, magazines, mailing materials and packaging”);
14 Ex. 127.

15 262. Out of the 209 individual PCB congeners, at least 130 may be
16 produced unintentionally through manufacturing processes, or by simple
17 combustion/incineration. Nott Davis Decl., Ex. 18, (“Rodenburg San Diego
18 Dep.”), 54:14-24. For example, PCBs 11 and 209 are commonly found in
19 pigments. Nott Davis Decl., Ex. 54 p. 9; Ex. 17 (“Rodenburg Dep.”), 36:5-15,
20 43:6-14; Ex. 18 (“Rodenburg San Diego Dep.”), 26:11-21, 54:14-24; Ex. 33

22 ² Rodenburg adopted her admissions regarding byproduct PCBs from her San
23 Diego deposition. Nott Davis Decl., Ex. 17 (“Rodenburg Dep.”), 13:2-18:20.
24

1 (“Rodenburg Rpt.”), p. 15.

2 263. The USEPA allows products to contain up to 50 ppm of byproduct
3 PCBs. Nott Davis Decl., Ex. 9 (“Coghlan Dep.”), 102:13 – 104:13; Ex. 19
4 (“Rodenburg Hartford Dep.”)³, 163:3-10. However, the USEPA does not enforce
5 that regulation. Nott Davis Decl., Ex. 19 (“Rodenburg Hartford Dep.”), 162:16-
6 163:14.

7 264. Byproduct PCBs are found in consumer products at concentrations of
8 up to 2,000 ppm—more than 11,764,695,882 time greater than the 170 ppq water
9 quality standard for the State of Washington. Nott Davis Decl., Ex. 17
10 (“Rodenburg Dep.”), 16:10-18:20; Ex. 18 (“Rodenburg San Diego Dep.”), 28:6-
11 34:4, 55:15-56:5.

12 265. The City purchases and uses products containing byproduct PCBs,
13 including deicer, motor oil and lubricant, and Hydroseed. Nott Davis Decl., Ex.
14 128, p. 11, 15, 23; Ex. 17 (“Rodenburg Dep.”), 260:4-13.

15 266. It is unknown how many products containing byproduct PCBs are
16 used in the Spokane River watershed area. Nott Davis Decl., Ex. 17 (“Rodenburg
17 Dep.”), 50:17 – 51:3.

18 267. Byproduct PCBs are also generated by waste incineration. Nott Davis
19 Decl., Ex. 17 (“Rodenburg Dep.”), 51:4-6, 57:12 – 61:22. The City operates a
20 waste-to-energy incineration plan, which disposed of nearly 138,000 metric tons of

21 _____
22 ³ Rodenburg adopted her admissions regarding the lack of enforcement by the EPA
23 of the 50 ppm standard with respect to byproduct PCBs. Nott Davis Decl., Ex. 17
24 (“Rodenburg Dep.”), 17:9-18.

garbage in 2015. Nott Davis Decl., Ex. 4 (“Windsor Dep.”), 114:15-19; Ex. 17 (“Rodenburg Dep.”), 51:4-6, 65:2 – 66:13, 67:14 – 68:6; *see* Exs. 129 & 130.

268. Byproduct PCBs are transported in stormwater runoff. Nott Davis Decl., Ex. 128, p. 1.

269. The City admits that it likely contributes to the concentrations of byproduct PCBs in stormwater through its purchase of products that contain inadvertent PCBs, such as road striping paint. Nott Davis Decl., Ex. 1 (“Hendron Dep.”), 322:25 – 323:4; Ex. 2 (“Davis Dep.”), 215:17 – 216:6. The City’s ordinance concerning the purchase of products containing byproduct PCBs is riddled with loopholes that allows the City to purchase those products routinely. Nott Davis Decl., Ex. 5 (“Feist Dep.”), 582:23-583:15, 584:9-585:12, 591:12-20; 592:3-11, 594:11-595:3.

270. Legacy sources of PCBs, such as Aroclors, are generally declining as they have been removed from use and are remediated over time. But byproduct PCB sources, such as pigment, are not declining “and may actually be increasing as digital printing becomes more prevalent.” Inadvertent PCBs “are essentially uncontrolled resulting in exposure to people in the environment.” Nott Davis Decl., Ex. 131, p. SPOKANE-PRR-035841; *see also* Ex. 19 (“Rodenburg Hartford Dep.”), 65:7-10.

271. PCB-11 is used as an indicator of byproduct PCBs because “it is virtually unfound in commercial Aroclors.” Nott Davis Decl., Ex. 18 (“Rodenburg San Diego Dep.”), 26:11-21. In certain sampling data, PCB-11 alone constitutes as much as 20% of the total PCBs in the Spokane River water column. Nott Davis Decl., Ex. 132, p. 10.

1 272. Before being hired as a litigation expert in this case, Lisa Rodenburg,
2 the City’s expert on PCB product identification, stated in an academic seminar that
3 “the one PCB congener that is now dominant in the effluent is PCB-11, which is
4 the one that comes from pigments. And so this is a problem for the [County of
5 Spokane] because they can go after the Aroclor-type sources. . . . They can try to
6 remove all transformers and capacitors. . . . But that’s not their main problem.
7 Their main problem is PCB-11 for pigments, and what are they going to do about
8 that[?]” Nott Davis Decl., Ex. 133 (“PCBs: An Update”), 52:13 – 53:3; Ex. 17
9 (“Rodenburg Dep.”), 70:22 – 71:16.

10 **XXII. MONSANTO APPROPRIATELY WARNED ITS CUSTOMERS**

11 273. All substances, including industrial chemicals, are systemically toxic
12 at some dose, but simply because a product is capable of causing systemic toxicity
13 does not mean that the product should be removed from the market. Nott Davis
14 Decl., Ex. 16 (“Olson Westport Dep.”)⁴, 55:12 – 56:18, 133:5-25, 225:2-22,
15 228:19 – 229:13; Ex. 15 (“Olson Dep.”), 21:21 – 22:50.

16 274. Olson, the City’s toxicologist, testified: “all substances are poison; it’s
17 simply the dose that distinguishes a poison from a remedy.” Nott Davis Decl., Ex.
18 15 (“Olson Dep.”), 21:10-16. Olson agrees just because there is an exposure, does
19 not necessarily mean someone is going to get a dose. Nott Davis Decl., Ex. 15
20 (“Olson Dep.”), 21:11-17, 22:22-25.

21 275. Beginning in the 1930s, Monsanto commissioned hundreds of
22 _____

23 ⁴ Olson adopted his prior admissions from the San Diego, Hartford, and Westport
24 cases. Nott Davis Decl., Ex. 15 (“Olson Dep.”), 10:11-16.

1 toxicological tests which disclosed that PCBs, like all industrial chemicals, were
2 capable of causing systemic toxicity at high doses, but could be safely
3 manufactured and used. *See* Nott Davis Decl., Ex. 16 (“Olson Westport Dep.”),
4 137:7-24, 155:11-15, 182:18 – 183:7, 225:2-22, 228:19 – 229:13.

5 276. At all times relevant to this case, there was no legal requirement,
6 government or industry standard, or recommendation from any source that required
7 long-term toxicology tests of chronic low-level environmental exposures to PCBs
8 prior to its sale. Nott Davis Decl., Ex. 8 (“Carpenter Dep.”), 102:21-25, 103:4-11;
9 Ex. 16 (“Olson Westport Dep.”), 121:6 – 122:25, 143:5-10, 229:14 – 231:2, 234:23
10 – 235:7.

11 277. At all times relevant to this case, Monsanto supplied Aroclor product
12 bulletins and warning labels to each of its customers. Nott Davis Decl., Ex. 32
13 (“Reitman Rpt.”), p. 11-12. These bulletins contained then-known toxicological
14 information regarding exposures to PCBs and information on their safe handling.
15 *See e.g.* Nott Davis Decl., Ex. 134. These bulletins also provided physical and
16 chemical characteristics for the Aroclors. Nott Davis Decl., Ex. 32 (“Reitman
17 Rpt.”), p. 11-12.

18 278. In 1937, Monsanto warned its customers: “Experimental work in
19 animals shows that prolonged exposure to Aroclor vapors evolved at high
20 temperatures or by repeated oral ingestion will lead to systemic toxic effects.” Nott
21 Davis Decl., Ex. 135; Ex. 8 (“Carpenter Dep.”), 86:24 – 87:6.

22 279. This warning was repeated in a 1943 application data bulletin, in
23 which Monsanto warned: “Experimental work on animals shows that prolonged
24 exposure to Aroclor vapors evolved at high temperatures or by repeated oral

1 ingestion will lead to systemic toxic effects.” Nott Davis Decl., Ex. 136.

2 280. In a 1955 technical bulletin, Monsanto provided the following
3 warning: “The vapors emitted by Aroclor 1248 heated to elevated temperatures are
4 injurious to the liver on prolonged exposure and should not be breathed.” Nott
5 Davis Decl., Ex. 137, p. 4. In a 1966 technical bulletin, Monsanto warned: “If
6 these precautions are neglected acne may develop and excessive exposure may
7 cause liver damage.” Nott Davis Decl., Ex. 138, p. 23.

8 281. In early 1970, Monsanto issued warning letters to all of its known
9 customers and distributors alerting them to the developing information regarding
10 the environmental presence of PCBs. Nott Davis Decl., Ex. 121. In the letter,
11 Monsanto advised, “good manufacturing practice in the future may require that no
12 products used by any company should find their way into waterways.” Nott Davis
13 Decl., Ex. 139. Monsanto encouraged its customers to provide similar information
14 to the customers of their customers. *Id.*

15 282. In March 1970, Monsanto reissued its Aroclor technical bulletins,
16 including Technical Bulletin o/PL-306A entitled, Aroclor Plasticizers. Nott Davis
17 Decl., Ex. 140. In that bulletin, Monsanto included the following Environmental
18 Hazard warning:

1 *Environmental Hazards*

2 Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor 1254, Aroclor 1260,
3 Aroclor 1262, Aroclor 1268, Aroclor 4465, and Montar 1 all contain
4 polychlorinated biphenyls (PCB) of various types and in varying
5 amounts. PCB residues in small amounts have been found in the
6 environment and some studies have indicated that they may be harmful
7 to certain forms of animal life. Extreme care should therefore be taken
8 by all users of PCB-containing products to prevent any entry into the
9 environment through spills, leakage, use, disposal, vaporization or
10 otherwise. Further, the products in which PCB materials are used,
11 or which are formulated using PCB materials as a component, should
12 be given careful study to eliminate the possibility that PCB might
13 reach the environment as a result of use in a given application.

14 Some specific applications where the use of PCB should definitely
15 be avoided are in paints and sealants for swimming pools, paints and
16 waterproofing agents in silos and other buildings where food products
17 for humans or animals are stored, and as a component of any container
18 or wrapping used in the packaging of food products.

19 283. David O. Carpenter, the City's public health expert, agreed that
20 Monsanto warned formulators that PCBs could pose serious health consequences
21 from repeated exposure to heated fumes or oral ingestion. Nott Davis Decl., Ex. 8
22 ("Carpenter Dep."), 86:24 – 87:6.

23 284. David Rosner, the City's expert historian, testified that Monsanto
24 "kept telling everyone" that PCBs were persistent and do not biodegrade. Nott
25 Davis Decl., Ex. 20 ("Rosner Dep."), 99:6-11.

26 285. Monsanto advised its customers of PCBs' chemical properties,
27 including their low vapor pressure, resistance to chemical and biological
28 breakdown, and stability, calling them "virtually indestructible," the ordinary
29 interpretation of which Mr. Rosner described as "persistent." Nott Davis Decl.,
30 Ex. 20 ("Rosner Dep."), 100:20 – 101:20; Ex. 141.

31 **XXIII. MONSANTO RESPONSIBLY ADVISED CUSTOMERS ON**
32 **PCB DISPOSAL**

33 286. Monsanto's letters, product bulletins, labels, Material Safety Data
34

1 Sheets, and invoices, warned its customers to be careful in the use and disposal of
2 PCBs to prevent their entry into the environment. In letters dated February 9, 1970
3 and February 18, 1970, Monsanto provided its PCB customers with a warning
4 letter stating that “PCBs had been discovered at some points in some marine,
5 aquatic, and wildlife environments. ... [W]e feel that all possible care should be
6 taken in the application, processing, and effluent disposal to prevent them
7 becoming environmental contaminants.” Nott Davis Decl., Ex. 142, p.
8 MCL000005-MCL000012; Ex. 143 p. MCL000094 – MCL000105.

9 287. Monsanto followed the February 1970 warning letters, with letters in
10 May 1970 to their customers, in which they “strongly urge[d]” their customers to
11 ship PCB waste to Monsanto facilities for storage and ultimate disposal. Nott
12 Davis Decl., Ex. 144, p. MCL000184–190.

13 288. In May 1970, Monsanto placed in their product bulletins an
14 environmental hazard warning which stated in part: “PCB residues in small
15 amounts have been found in the environment and some studies have indicated that
16 they may be harmful to certain forms of animal life. Extreme care should therefore
17 be taken by all users of PCB- containing products to prevent any entry into the
18 environment through spills, leakage, use, disposal, vaporization or otherwise.”
19 Nott Davis Decl., Ex. 145. PCB-ARCH0298272-0298286.

20 289. In August 1970, Monsanto sent out additional warning letters to its
21 PCB customers stating that they were withdrawing all PCBs used as plasticizers or
22 modifiers from the market and would provide incentives to customers to return
23 unused PCBs. *See* Nott Davis Decl., Ex. 146. MCL000397–398.

24 290. On September 25, 1970, Monsanto sent a letter to its dielectric fluid

1 customers inviting them to ship all PCB waste material to Monsanto for eventual
2 incineration and alerting them to the incinerator services offered by another
3 company. Nott Davis Decl., Ex. 147, p. MCL000611-640.

4 291. On October 26, 1970, Monsanto alerted its vacuum pump fluid
5 customers as follows: “Control of waste and spills is imperative. In no case should
6 the material be discharged directly to streams. Used Santovac I or Santovac II
7 should be reclaimed for continuous recycle or returned to Monsanto for disposal.”
8 Nott Davis Decl., Ex. 148, p. MCL000691-696.

9 292. Additionally, in 1970, Monsanto provided information to Therminol
10 FR customers stating “... measures to avoid environmental contamination through
11 spillage, leakage or careless disposal should be observed.” Nott Davis Decl., Ex.
12 149, p. PCB-ARCH0048779.

13 293. In the Therminol Conversion Bulletin from 1970, Monsanto stated
14 “Most recently, PCB has been identified as a potential hazard to the environment.
15 Monsanto has accordingly elected to discontinue the manufacture and sale of
16 Therminol FR fluids for heat transfer applications.” Additionally, in the same
17 1970 Therminol Conversion Bulletin, Monsanto advised that “Monsanto offers an
18 incineration service for the disposal of PCB heat transfer fluids.” Nott Davis Decl.,
19 Ex. 150, p. PCB-ARCH0588885–905.

20 294. On April 1, 1971, Monsanto issued its Askarel Inspection and
21 Maintenance Guide that instructed users to dispose of carbon-contaminated
22 Askarel in such a way “where it will not contaminate a water supply.” Nott Davis
23 Decl., Ex. 151, p. PCB-ARCH0168693-725.

24 295. On October 1, 1971, Monsanto issued its Aroclor & Pyroclor Bulk

1 Handling Manual which stated, “Pollution of the environment must be prevented
2 by careful handling so that spillages are minimized and any that occur should be
3 contained and collected. Do not dispose of waste Aroclor or Pyroclor into drains or
4 sewers. Furthermore, waste Aroclor or Pyroclor should be incinerated or reclaimed
5 and details of the service are available from Monsanto.” The manual also warned
6 against PCB waste “entering water courses and sewers.” Nott Davis Decl., Ex.
7 152, p. PCB-ARCH0277364-388.

8 296. On December 1, 1971, Monsanto issued its Therminol Conversion
9 Bulletin, which stated that “Monsanto urges the user to maintain the tight system,
10 to correct leakage promptly, and to exercise care in the handling and disposal of
11 this and all other such products.” As for “fluid disposal,” the Bulletin stated that
12 “Monsanto offers an incineration service for disposal of PCB heat transfer fluids.
13 ...” Nott Davis Decl., Ex. 153, PCB-ARCH0247276-290.

14 297. On August 1, 1973, Monsanto issued its Aroclor 1242 E1 Bulletin,
15 which provided disposal instructions, including recommendations for incineration,
16 and warned that “care must be exercised during such disposal and the ultimate use
17 of Aroclor to avoid pollution, particularly of sewers and waterways.” Nott Davis
18 Decl., Ex. 154, p. PCB-ARCH0163690-693; Ex. 155, PCB-ARCH0036393-396;
19 Ex. 156, p. MCL02794-2960.

20 298. On December 1, 1973, Monsanto issued its Transformer Askarel
21 Inspection & Maintenance Guide, which set forth detailed disposal guidelines.
22 Nott Davis Decl., Ex. 157, p. PCB-ARCH0168665-692; Ex. 158, p. PCB-
23 ARCH0163708-715; Ex. 159, p. PCB-ARCH0168626-633.

24 299. In 1974, detailed guidelines on the disposal of PCBs were issued by

1 the American National Standards Institute (ANSI). Nott Davis Decl., Ex. 160, p.
2 PCB-ARCH0255676-711.

3 300. In March 1975, Monsanto issued a revised Transformer Askarel
4 Inspection & Maintenance Guide, specifically citing and setting forth ANSI
5 Disposal Guidelines. Nott Davis Decl., Ex. 161, p. PCB-ARCH0206370-397; Ex.
6 162, p. PCB-ARCH0523916-943.

7 301. On April 1, 1976, the United States Environmental Protection Agency
8 (USEPA) issued guidelines pertaining to the disposal of PCB-containing wastes.
9 The USEPA explicitly placed the responsibility for appropriate disposal of PCBs
10 on the generators of PCB- containing wastes from industrial facilities. Nott Davis
11 Decl., Ex. 13 (“Matson San Diego Dep.”)⁵, 262:7-18; 41 Federal Register (FR)
12 14134-14136.

13 302. On February 17, 1978, the USEPA promulgated detailed regulations
14 setting forth approved methods of PCB disposal. These included specifications on
15 conditions of incineration and landfill disposal. Thereafter, all entities were
16 required to follow those disposal regulations. 43 FR 7150-7164. Nott Davis Decl.,
17 Ex. 13 (“Matson San Diego Dep.”), 263:6 – 264:6.

18 303. The historical use of landfills to dispose of a wide variety of
19 substances including industrial chemicals was informed by the risks of placing
20

21 ⁵ Plaintiff’s counsel agreed that, in lieu of defense counsel deposing Matson again
22 on essentially an identical expert report, Monsanto could rely upon his San Diego
23 deposition testimony in this Spokane case. Nott Davis Decl., Ex. 117. (Email, B.
24 Land to D. Haase, 10/16/19)

1 those substances in landfills known at the time. Those risks, discussed above,
2 which included explosiveness, corrosiveness, flammability, acute toxicity to fish,
3 potential damage to disposal systems, unacceptable levels of smoke, odors, and
4 attraction of vermin and pests, did not implicate PCBs. *See* Nott Davis Decl., Ex.
5 163.

6 304. In 1972, the Interdepartmental Task Force, comprised of seven
7 agencies of the Federal Government, including the USEPA, noted that PCB waste
8 had been disposed of in landfills and stated “PCB containing material buried in soil
9 is not expected to migrate but should remain in place. Nott Davis Decl., Ex. 115, p.
10 4.

11 305. The Task Force further stated: “It seems reasonable that by far the
12 largest amount is present in dumps and landfills where it is thought to be more or
13 less sequestered from the rest of the environment.” Because of the chemical and
14 physical properties of PCBs, including low solubility, low vapor pressure, and
15 strong adsorption characteristics, PCBs do not easily migrate from landfills into
16 groundwater or water bodies. Nott Davis Decl., Ex. 115, p. 102.

17 306. The USEPA has recognized that disposal of PCBs in non-TSCA
18 landfills generally does not result in migration to groundwater and waterbodies.
19 USEPA has determined PCB bulk product waste can be safely disposed of in
20 certain non-TSCA approved landfills (those that have been permitted, licensed, or
21 registered by a State as a municipal or non-municipal non-hazardous waste
22 landfill). USEPA established this as a disposal option for PCB bulk product waste
23 in its 1998 rulemaking for disposal of PCBs. Additionally, USEPA evaluated the
24 fate and transport of PCBs leaching from landfills into groundwater using

1 USEPA's peer reviewed Industrial Waste Management Evaluation Model (IWEM).
2 This evaluation supports USEPA's determination that PCB bulk product waste can
3 be safely disposed of in certain non- TSCA approved landfills as it showed that
4 these wastes are unlikely to migrate into groundwater or soil. Nott Davis Decl.,
5 Ex. 164, [https://www.epa.gov/pcbs/frequent-questions-about-polychlorinated-](https://www.epa.gov/pcbs/frequent-questions-about-polychlorinated-biphenyl-pcb-guidance-reinterpretation)
6 [biphenyl-pcb-guidance-reinterpretation](https://www.epa.gov/pcbs/frequent-questions-about-polychlorinated-biphenyl-pcb-guidance-reinterpretation); 40 CFR 761.62.

7 307. The USEPA, as previously discussed, promulgated regulations
8 specifically permitting disposal of PCBs in landfills. As also discussed, the
9 USEPA has expressly recognized that PCB disposal in non-TSCA landfills may be
10 appropriate. Historically, there have been no federal or state laws or regulations
11 prohibiting the disposal of PCBs in landfills. Nott Davis Decl., Ex. 164,
12 [https://www.epa.gov/pcbs/frequent-questions-about-polychlorinated-biphenyl-pcb-](https://www.epa.gov/pcbs/frequent-questions-about-polychlorinated-biphenyl-pcb-guidance-reinterpretation)
13 [guidance-reinterpretation](https://www.epa.gov/pcbs/frequent-questions-about-polychlorinated-biphenyl-pcb-guidance-reinterpretation); 40 CFR 761.62.

14 308. In 1970, based on pilot studies conducted in the John Zink Company
15 pilot plant thermal oxidizer, Monsanto determined that PCBs could be destroyed
16 via high temperature incineration. Based on the pilot testing results, a full-scale
17 incinerator was constructed at the Monsanto plant in Sauget, IL in 1971. Nott
18 Davis Decl., Ex. 165, p. MONS 0444175 - MONS 044183.

19 309. In addition to the fact that incinerators prior to the late 1960s could
20 not reach temperatures sufficient to destroy PCBs, the combustion of halogenated
21 compounds, including PCBs, polyvinyl chloride (PVC) plastics, and chlorinated
22 solvents, results in the production of hydrochloric acid. This hydrochloric acid can
23 corrode metal components of the incinerator and ancillary equipment (e.g., air
24 handling equipment). To remove hydrochloric acid from incinerator exhaust gases,

1 air pollution control equipment, such as wet scrubbers, is required. Such
2 equipment, which is required for incinerators used to dispose of halogenated
3 wastes, was not developed until the 1950s to 1960s. Nott Davis Decl., Ex. 166
4 (“Koon Rpt.”), p. 20.

5 310. By the mid-1970s, incineration practice had reached the level
6 reflected in the TSCA Annex I regulations promulgated in 1979. Therefore, state-
7 of-the-art incinerator technology, design, and operational practices changed
8 significantly from the 1930s through 1978 (promulgation of TSCA regulations for
9 PCB disposal) as the understanding and capabilities of incineration developed.
10 Oppelt, in his thorough review of incineration as an available technology for the
11 treatment of hazardous wastes, stated that “properly-designed incineration systems
12 are capable of the highest overall degree of destruction and control for the broadest
13 range of hazardous waste streams.” Nott Davis Decl., Ex. 167, p. 558-586.

14 311. Monsanto instituted a returned goods policy in May 1970. Nott Davis
15 Decl., Ex. 168, p. MCL000184-190.

16 312. On May 11, 1970, Monsanto sent a letter to its customers advising
17 them that it “has been devoting considerable effort to the development of
18 mechanisms for the disposal of these materials, including Askarel fluid, from
19 manufacturing locations, service shops, and customers.” Nott Davis Decl., Ex.
20 168, p. MCL000184-190.

21 313. Monsanto strongly urged its customers and its customers’ customers
22 to make use of its return program for proper disposal of PCB materials. Nott Davis
23 Decl., Ex. 168, p. MCL000184-190.

24 314. In addition, Monsanto’s PCB returned goods policy incentivized its

1 customers to quickly return their unused PCB fluid: “During this withdrawal of
2 PCBs from the market, Monsanto has had in effect a modified returned goods
3 policy stating that unopened containers less than one year old could be returned for
4 full credit through July 31, 1970. From August 1 through August 31, 1970, 90
5 percent credit would be allowed. From September 1 through December 31, 1970,
6 50 percent credit would be allowed. The customer will pay all return freight. All of
7 the dates in the time schedule for this returned goods policy are hereby extended an
8 extra two months.” Nott Davis Decl., Ex. 169, at MCL00443.

9 315. When Monsanto shut down its incinerator in late 1977, there were a
10 number of commercial incinerators available for the disposal of PCB wastes and
11 the final PCB disposal regulations were in the process of being finalized by
12 USEPA. In 1974, the American National Standards Institute, Inc. (ANSI) provided
13 guidelines for the handling and disposal of PCBs (the “C107 Standard”). Available
14 incineration sites listed in the C107 Standard included Chem-Trol Pollution
15 Services, Inc. in Model City, NY and Rollins Environmental Services in
16 Wilmington, Delaware, in addition to the Monsanto incinerator. *See* Nott Davis
17 Decl., Ex. 170.

18 316. In the late 1970s, there were approximately 20 incinerators capable of
19 handling liquid PCBs. Nott Davis Decl., Ex. 171, p. 23.

20 317. In an undated (presumably 1977) document, USEPA states: “Based
21 on the latest USEPA national survey of commercial hazardous waste incineration
22 facilities, there are approximately twenty liquid waste incineration operations
23 which will not or do not have the capability of handling solid PCB wastes. There
24 are three installations which presently have the capability of handling both solid

1 and liquid PCB-containing wastes and which have the presently required
2 environmental approvals. Additionally, there are two installations which have
3 liquid PCB incineration capability and one installation with both solid and liquid
4 PCB waste Incineration capability which are awaiting state operating permits.”
5 Nott Davis Decl., Ex. 171, p. 23.

6 318. In December 1976 pursuant to TSCA Section 6(e)(1), USEPA
7 established a PCB working group to write proposed rules and regulations related to
8 disposal and marking for PCBs. The proposed rules were to be published no later
9 than March 31, 1977. 41 FR 53692.

10 319. On May 24, 1977, the USEPA Office of Toxic Substances published
11 in the Federal Register, a proposed rule which prescribed disposal and marking
12 requirements for PCB's. 42 FR 26564-26577.

13 320. The informal hearings required under section 6(c)(2) and 6(e)(4) of
14 the TSCA February 17, 1978 rule were held on June 24, 27, 28, and 29, 1977.
15 After the public comment period expired, the final rule was promulgated on
16 February 17, 1978. Therefore, at the time Monsanto decided to discontinue the
17 operation of its PCB incinerator in 1977, detailed proposed disposal regulations
18 had been made public and were largely identical to those regulations that were
19 ultimately enacted. *See* 43 FR 7159.

20 321. Additionally, on or before August 15, 1977, Monsanto notified its
21 customers by letter that it would cease accepting PCB waste and identified
22 alternative PCB incineration operators. In summary, at the time Monsanto decided
23 to cease PCB incineration, other PCB incinerators were in operation, and the
24 USEPA had announced the imminent publication of detailed PCB disposal

1 regulations which included both incineration and landfill disposal. Nott Davis
2 Decl., Ex. 172, p. MCL003102-3418.

3 322. Monsanto's customers returned over 29 million pounds of PCB
4 wastes to Monsanto for disposal. From the time Monsanto started accepting PCB
5 wastes from its customers in 1971 and the time its incinerator was shut down in
6 December 1977, Monsanto incinerated over 27.3 million pounds of PCB wastes in
7 its incinerator and contracted with other commercial incinerators for the
8 incineration of approximately 1.8 million pounds of PCB wastes. As of January
9 1978, Monsanto had properly disposed of the over 29 million pounds of PCB
10 wastes that it had received from its customers. Nott Davis Decl., Ex. 173, p. PCB-
11 ARCH0450243 - PCB-ARCH0450244.

12 323. At the time Monsanto operated its PCB incinerator, there did not exist
13 technology that was proven to effectively incinerate solid PCB waste. As the
14 USEPA noted in its 1976 PCB Disposal Guidelines, "The above recommendations
15 are suitable for liquids. Incineration of solid wastes including PCBs has not been
16 demonstrated." 41 FR 14134-14136.

17 324. The liquid injection incinerator constructed by Monsanto was the best
18 choice for the disposal of PCBs at that time for the following reasons: The largest
19 mass of PCBs that could reasonably be collected for incineration were in liquid
20 form; and the liquid injection incinerator was recognized as the best system for
21 incineration of liquid PCBs. Nott Davis Decl., Ex. 174, p. 1.

22 325. By the time the USEPA published its 1978 PCB Disposal
23 Regulations, it had been satisfied that effective incineration of PCB solids could be
24 accomplished. 43 FR 7150-7164.

1 326. During the period Monsanto manufactured PCBs, there were no local,
2 federal or state laws that required chemical manufacturers to provide disposal
3 instructions to its customers or to discharge chemical wastes in a specific manner.
4 Nott Davis Decl., Ex. 20 (“Rosner Dep.”), 29:18-24, 31:25 – 32:25, 33:2-4, 38:4-
5 20, 39:11 – 40:6.

6 327. J. Keith Nelson, the City’s dielectric fluids expert, stated that, “At all
7 times, it was well recognized in the industry that some amount of PCBs would be
8 released into the environment by transformer and capacitor manufacturers. In
9 earlier times, **releases to the environment were legal** and therefore foreseeable to
10 those in the power industry...” Nott Davis Decl., Ex. 30 (“Nelson Rpt.”), p. 11-12
11 (emphasis added).

12 328. Until 1976, there was no single regulatory body that established
13 uniform disposal practices for PCBs. Nott Davis Decl., Ex. 20 (“Rosner Dep.”),
14 31:25 – 32:13. It was up to the individual customers to determine how best to
15 adopt these disposal recommendations. Nott Davis Decl., Ex. 6 (“Kaley
16 01/09/2020 Dep.”), 508:2 – 509:6.

17 329. David Rosner, the City’s expert historian, agreed that during the
18 1930s through the 1960s, there were no standards by which industry determined
19 the appropriate methods for the disposal of chemical wastes. Nott Davis Decl., Ex.
20 20 (“Rosner Dep.”) 29:18-24. Jack Matson, the City’s chemical waste expert,
21 similarly did not know of any standard governing the instruction of customers
22 regarding proper PCB disposal practices. Nott Davis Decl., Ex. 13 (“Matson San
23 Diego Dep.”), 61:1-9.

1 **XXIV. MONSANTO CANNOT WARN OF HARMS THAT ARE NOT**
2 **KNOWN**

3 330. There are no scientific studies, either during the period of Monsanto's
4 manufacture of PCBs or today, that purport to demonstrate that the levels of PCBs
5 found in the Spokane River cause human disease. Nott Davis Decl., Ex. 15 ("Olson
6 Dep."), 14:14-24; Ex. 8 ("Carpenter Dep."), 122:19 – 123:3; Ex. 10
7 ("DeGrandchamp Dep."), 91:10 – 92:9.

8 331. Jack Matson, the City's chemical waste expert, admitted that, during
9 the period of Monsanto's manufacture of PCBs, there were no scientific studies
10 that showed injury to humans due to exposure to environmental levels of PCBs.
11 Nott Davis Decl., Ex. 12 ("Matson Westport Dep.")⁶, 122:4-21.

12 332. Olson, the City's toxicologist, admitted that he could not testify as to
13 whether PCBs caused any adverse human condition. Nott Davis Decl., Ex. 15
14 ("Olson Dep."), 19:19-22. Olson also testified that if Monsanto had commissioned
15 toxicity studies of PCBs at ambient dosage levels, it would not have found any
16 adverse health effects. Nott Davis Decl., Ex. 16 ("Olson Westport Dep."), 245:5-
17 12. Olson acknowledged at his deposition that, by "low-level exposure," he was
18 not referring to levels to which one might be exposed from PCB in the
19 environment, but to levels in laboratory animal studies which are orders of
20 magnitude higher. Nott Davis Decl., Ex. 16 ("Olson Westport Dep."), 159:8-17,
21

22 ⁶ Plaintiff's counsel agreed that, in lieu of defense counsel deposing Matson again
23 on essentially an identical expert report, Monsanto could rely upon his prior
24 deposition testimony in this Spokane case. Nott Davis Decl., Ex. 117.

1 243:10 – 245:12

2 333. During the 1930s through the 1960s, it was not common for chemical
3 manufacturers to conduct long-term cancer testing of their chemicals. Nott Davis
4 Decl., Ex. 8 (“Carpenter Dep.”), 102:21-25, 103:4-11; Ex. 10 (“DeGrandchamp
5 Dep.”), 301:16 – 302:20.

6 334. During the period of Monsanto’s manufacture of PCBs from the
7 1930s to the 1960s, the available analytical methods that might be used to detect
8 PCBs in the environment could not detect PCBs at levels as low as 170 ppq. Nott
9 Davis Decl., Ex. 9 (“Coghlan Dep.”), 111:15 – 112:17.

10 335. No post-sale warning would have prevented the City’s alleged
11 injuries. *See supra.*, paras. 286-290.

12
13 January 28, 2020

Respectfully Submitted

14
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CERTIFICATE OF SERVICE

I certify that on January 29, 2020, I caused the foregoing to be electronically filed with the clerk of the Court using the CM/ECF System which in turn automatically generated a Notice of Electronic Filing (NEF) to all parties in the case who are registered users of the CM/ECF system. The NEF for the foregoing specifically identifies recipients of electronic notice.

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